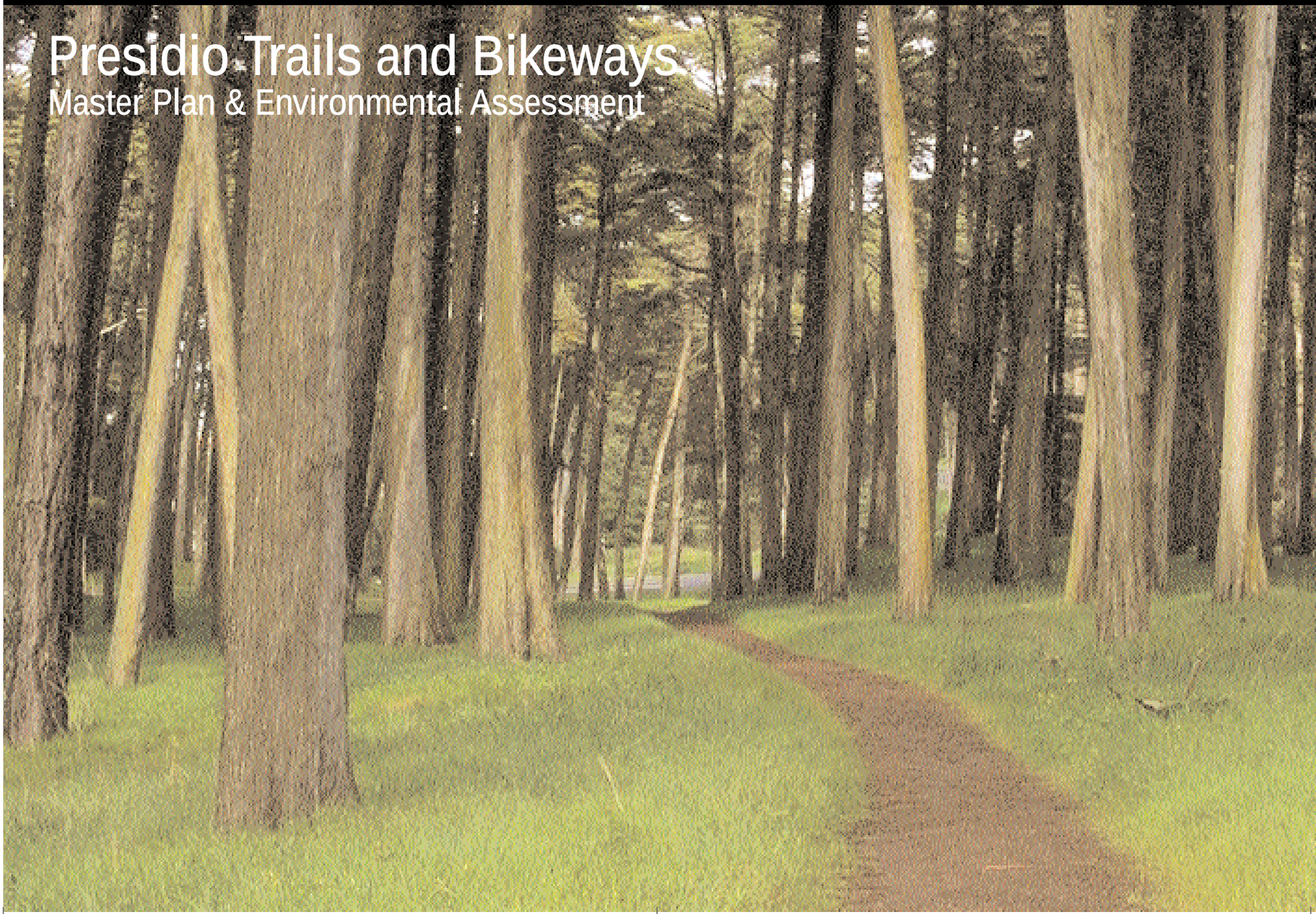
National Park Service, U.S. Department of the Interior
The Presidio Trust

Presidio of San Francisco, Golden Gate National Recreation Area
Draft, November, 2002

Presidio Trails and Bikeways

Master Plan & Environmental Assessment



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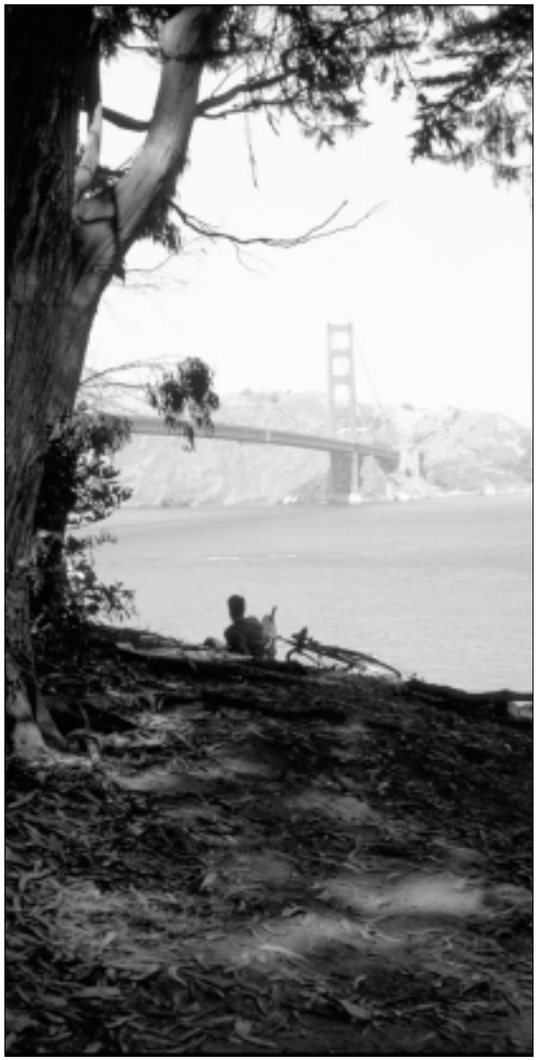
AASHTO	American Association of State Highway Transportation Officials
ADAAG	ADA Accessibility Guidelines
BAAQMD	Bay Area Air Quality District
BART	Bay Area Rapid Transit
BMPs	Best Management Practices
CalTrans	California Department of Transportation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act of the United States
EAs	Environmental Assessments
EIS	Environmental Impact Statement
FEMA	Federal Emergency Management Agency
GGNRA	Golden Gate National Recreation Area
GIS	Geographic Information System
GMPA	General Management Plan Amendment
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
PA	Programmatic Agreement
PM10	particulate matter less than 10 microns in diameter
Presidio VMP	Presidio's Vegetation Management Plan
PTMP	Presidio Trust Management Plan
SHPO	State Historic Preservation Officer
Trust	Presidio Trust
USFWS	U.S. Fish and Wildlife Service

1 Introduction



The Golden Gate Bridge from the Presidio

A Vision of the Future

The year is 2022, and as a beautiful summer day slides into evening, a group of people stop to enjoy a Pacific sunset at one of the Presidio's overlooks atop the coastal bluffs. The admirers include tourists, runners, a family out for a bicycle ride, a wheelchair athlete taking a break from her training, and a Presidio resident out for an evening stroll. All of them traveled to the overlook along the Presidio's well-maintained and interconnected network of pedestrian and multi-use trails and bikeways. The ability to meet the needs of these diverse park users, including Presidio residents, park neighbors and visitors, is the result of the successful implementation of the Presidio Trails and Bikeways Master Plan.

This idyllic scene had its start in 1999, when work began on a plan to develop an interconnected, safe and enjoyable pedestrian and bicycle network that provides access to the Presidio's unique natural, cultural, and historic resources. This vision for a future trails and bikeways system in the Presidio was developed based on public and agency involvement and includes:

- Logical, comprehensive, user friendly connections;
- A network of trails that provides a variety of trail experiences to meet user needs;
- Access and challenge for different ages, skills, and physical abilities;
- Preservation of the valuable natural and cultural resources that make the Presidio an outstanding national resource;
- A system that is part of a comprehensive transportation strategy that supports and encourages the use of alternative transportation and reduces dependence on cars;
- Coordination with regional and national trails, and local bicycle routes;
- An environmentally responsible system that fully incorporates the best in sustainable design and construction practices; and
- Ongoing public involvement in educational and stewardship programs.

Introduction

The Presidio Trails and Bikeways Master Plan will provide park visitors, neighbors, and Presidio residents with an interconnected, safe and enjoyable trails and bikeways system while protecting and managing the Presidio's natural

and cultural resources. The plan is a joint effort of the National Park Service (NPS) and the Presidio Trust (Trust), the two agencies responsible for the management of the area. It will guide management of Presidio trails and bikeways for the next 20 years.

The Council on Environmental Quality's (CEQ) regulations implementing the National Environmental Policy Act (NEPA) allow federal agencies to prepare Environmental Assessments (EAs) on any action (when no Environmental Impact Statement is necessary) in order to assist agency planning and decision making (40 C.F.R. 1501.3). The Presidio Trails and Bikeways Master Plan includes an integrated EA, which evaluates the potential environmental effects of four trails and bikeways alternatives.

Document Organization

This chapter provides project background, including document organization, Presidio history, planning context, planning process, scoping and public outreach, and an overview of the methodology used to develop the alternatives presented in this plan. It also presents the scope of the plan's EA component and a preliminary implementation plan.

Chapter 2 describes the project's purpose, needs, goals and objectives.

Chapter 3 describes the Presidio's trails and bikeways classification system and design guidelines. The chapter also summarizes the Best Management Practices (BMPs) that would be incorporated in all project alternatives.

Chapter 4 summarizes proposed trail modifications by trail corridor, and reviews the four alternative trails and bikeways concepts developed for the Presidio.

Chapter 5 analyzes the environmental impacts of the alternatives, as well as cumulative impacts.

Chapter 6 provides reference and consultation information.

Chapter 7, Appendices, includes a summary of public comments, Best Management Practices (BMPs), natural resource conservation measures, and a cumulative project list.

The Presidio's History

The Presidio of San Francisco is part of the Golden Gate National Recreation Area (GGNRA). It is also a National Historic Landmark District, the highest level of federal historic designation.

The park spans 1,491 acres from the Pacific Ocean to the San Francisco Bay on the northern tip of San Francisco. The Presidio includes nearly 500 historic buildings and structures, a collection of coastal defense fortifications, a national cemetery, a historic airfield, a saltwater marsh, forests, beaches, native plant habitats with federally listed species under the Endangered Species Act, coastal bluffs, miles of hiking and biking trails, and some of the most spectacular vistas in the world. Figure 1-1 illustrates the Presidio's regional context.

The Presidio has been shaped by many influences, from the Ohlone people who lived, gathered and collected shellfish here, to the armies of Spain and Mexico. The Spanish established the Presidio as a military post more

The Historic Cemetery

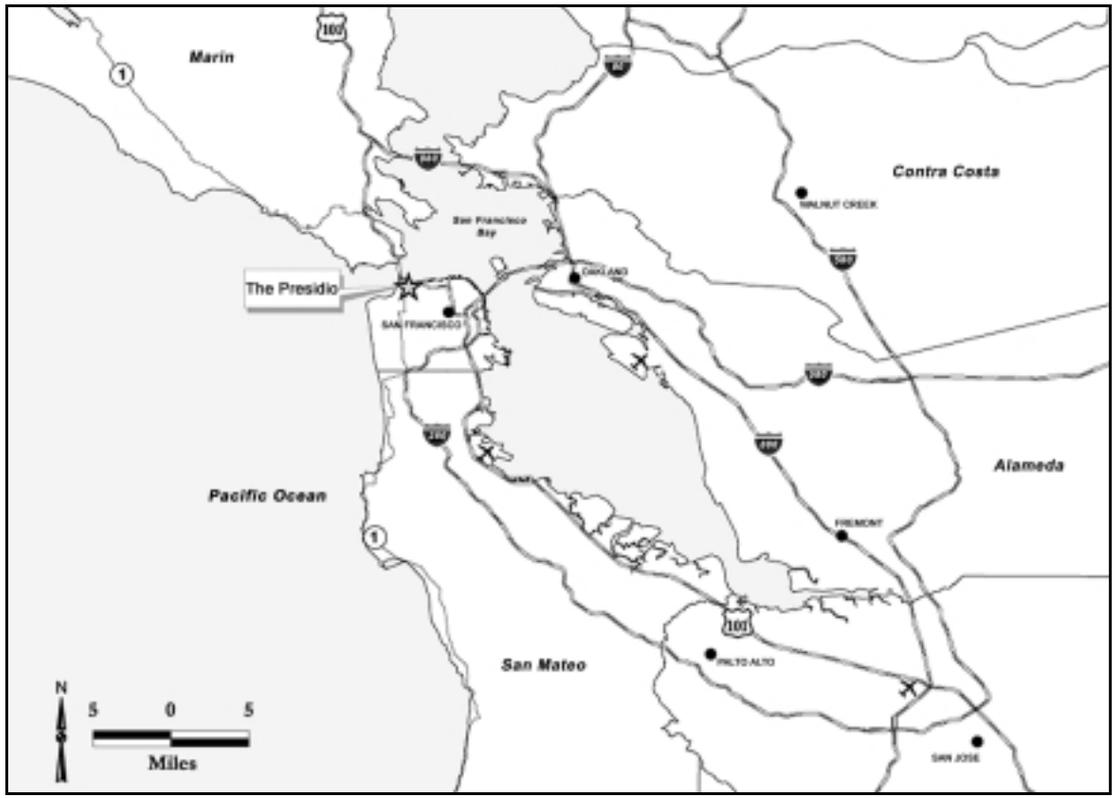


Figure 1-1. *Regional Map*

than 200 years ago in 1776, when Juan Bautista de Anza explored the peninsula and claimed the land for the king of Spain. When Mexico gained its independence from Spain in 1821, Mexican troops occupied the Presidio.

In 1848, the U.S. Army took over the area and remained in control of the Presidio until 1994. The military base was then closed and the Presidio transferred to the National Park Service to become part of the Golden Gate National Recreation Area. Up to that time, the Presidio was the oldest continuously operated military post in the nation.

As part of the transition, the NPS completed and adopted a comprehensive land use plan called the General Management Plan Amendment (GMPA) in 1994 (NPS 1994). The GMPA defined the direction for resource preservation and visitor use in the Presidio, and proposed that a comprehensive trails and bikeways plan be created.

In 1996, Congress passed the Presidio Trust Act. The Act created the Presidio Trust, and gave it jurisdiction over the park's non-coastal areas (Area B) – about 80% of the Presidio land – while the NPS retained jurisdiction over the coastal areas (Area A). Areas A and B are shown in Figure 1-2.

The Act included a mandate that the Trust achieve financial self-sufficiency by 2013. On July 1, 1998, the Trust assumed administrative jurisdiction over Area B; and in August 2002 the Trust adopted an updated management plan for Area B, the Presidio Trust Management Plan (PTMP).

Planning Context

The Presidio Trails and Bikeways Master Plan is coordinated and consistent with Presidio and regional plans.

- The General Management Plan Amendment is the comprehensive land use plan for Area A of the Presidio. It defines the direction for resource preservation and visitor use, with a

key goal of increasing pedestrian and bicycle use. It proposes a trail circulation plan to improve bicycle and pedestrian safety, resource protection, user access, visitor amenities, and trail connections.

- The *Presidio Trust Management Plan* (PTMP) is the Trust's comprehensive land use plan for Area B of the Presidio, and defines objectives for resource preservation and enhancement, and public access. The PTMP calls for a comprehensive bicycle and pedestrian network, and includes policies regarding transportation demand management, public use, and accessibility.
- The Presidio's Vegetation Management Plan (Presidio VMP) was prepared jointly by the NPS and Trust and completed in 2001. It describes restoration and maintenance goals for three landscape zones: 1) natural, native plant zones; 2) cultural, planted or ornamental landscape zones; and, 3) planted, historic forest zones. All the proposed trails and bikeways improvements are consistent with the VMP.

The Presidio Trails and Bikeways Master Plan also considers other relevant regional trails and bikeways plans to enhance connections to and through the Presidio. Plans considered include the San Francisco Bicycle Plan, the San Francisco Bay Trail Plan (the San Francisco Bay Plan), the Juan Bautista de Anza National Historic Trail Plan, and Bay Area Ridge Trail planning documents.

Planning Process

A multi-disciplinary core planning team consisting of NPS and Trust staff guided the planning process. The team consisted of experienced park planners and staff with expertise in natural and cultural resources, facilities management, interpretation, visitor protection, and transportation. The planning process is described in the paragraphs that follow and included:

- Scoping and public outreach;
- Review of existing conditions;
- Field analysis of site conditions;
- Analysis of opportunities and constraints;
- Development of a range of alternatives;
- Description of the probable environmental impacts of the alternatives; and
- Preparation of a draft plan;

The next steps are:

- Formal public review;
- Revisions; and
- Final plan adoption.

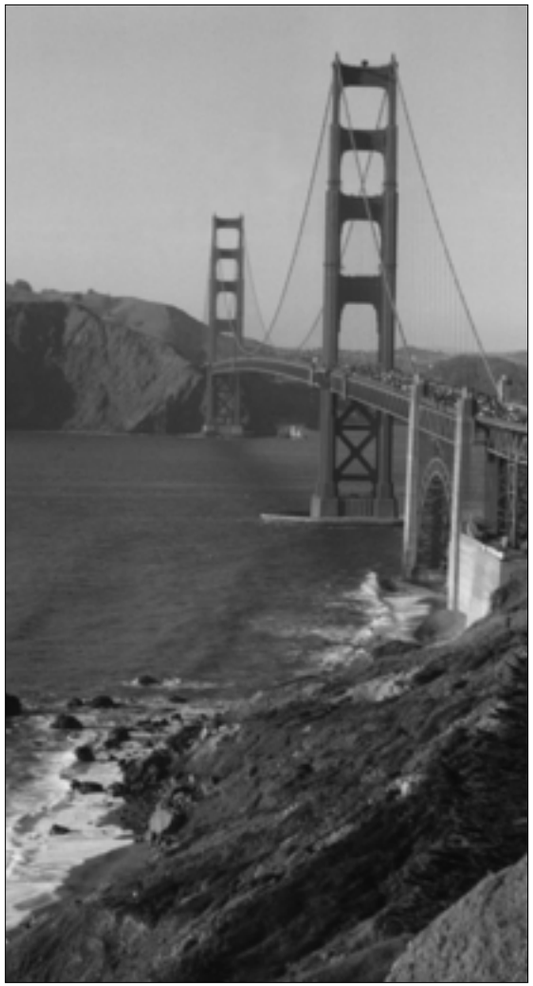
Scoping and Public Outreach

The NEPA encourages an early and open process for determining the scope of issues to be addressed in environmental documentation, and for identifying the significant issues related to a proposed action (40 CFR 1501.7). The team conducted both internal and public scoping activities.

Internal scoping activities, including a Trust and NPS planning meeting in April 2001, offered an opportunity for stakeholder agencies to provide input to integrate all necessary tasks, consultation, and products into the planning process. In addition, the planning team involved the City of San Francisco, Marin County, the Association of Bay Area Governments, and the Golden Gate Bridge District in scoping and public involvement activities.

The public was involved in identifying issues and developing goals and objectives through a public scoping process that included a general public

Figure 1-2. *The Presidio of San Francisco*



The Golden Gate Bridge from the Presidio

meeting, a series of focus group meetings, a design concept workshop, a survey of park users, and various opportunities for written comment. (Survey results and public comments are summarized in Appendix A.)

A Trust-sponsored Public Update Meeting on Trust transportation planning initiatives was held in October 1999, introducing the Trails and Bikeways Master Plan planning process.

A Public Scoping Meeting in December 1999 provided an opportunity for the public to formally review and provide input on the proposed project. The meeting incorporated large and small group discussions, as well as opportunities to submit written comments. Nearly 60 people attended the meeting.

Next, the NPS and Presidio Trust hosted five separate *Focus Group Sessions* in February 2000 to gather input and feedback from major park user groups. The focus group sessions included:

1) Presidio Tenants and Residents,
2) Resource Conservation Groups,
3) Neighborhood Coalitions, Regional Groups and Government Agencies,
4) Wheeled Sports Groups,
5) Trail Users.

In June 2000, a Design Concept Public Workshop was held to offer the public an opportunity to review and provide input on the conceptual trails and bikeways circulation plan. About 45 people attended the workshop.

To confirm the preliminary trail alignments and connections, the team conducted a User Survey for two days in July 2000. The survey gathered user data on current trail and bicycle use patterns, desired connections, and destinations using intercept and mail-in surveys. A total of 757 surveys were collected.

Additional and ongoing public involvement opportunities will be provided in future planning efforts that require major trail construction and through a NPS and Trust Trail Stewardship Program.

Analysis and Alternatives Development

Consultants and staff carried out extensive on-site evaluation of the existing trail system, identifying physical and structural problems, use patterns, safety concerns, and trail destination and connection opportunities. The team evaluated Presidio resources to determine constraints to potential trail alignments, and opportunities to correct existing problems and

create new recreation, commuter routes or interpretive experiences. This analysis reviewed trail corridors relative to geologic and hydrologic factors, biological resources, traffic safety, and cultural and scenic resources.

The analysis was mapped on a GIS trail database so that trail alignments could be adjusted accordingly. If the resource analysis mapping indicated potential conflicts between resource protection and desired trail alignments, the team conducted field checks to verify conditions and determine an appropriate course of action.

Based on this analysis, the team developed four trails and bikeways alternatives for analysis in the EA. One alternative is to take no action, which assumes that no comprehensive changes or major new trail building activities would take place. The other three are "action" alternatives, which present a range of trail types to test.

Environmental Consequences

In the context of an EA, the NEPA requires that federal agencies evaluate the proposed federal action to determine whether it would result in significant effects on the human environment. Chapter 5 analyzes the environmental impacts of the four Presidio Trails and Bikeways Master Plan alternatives on geology, hydrology, biological

Public Scoping Meeting, December 1999

resources, cultural resources, traffic safety, visitor use, visual resources, air quality and noise. This analysis provides the basis for comparing the beneficial and adverse effects of the alternatives, and includes an assessment of cumulative effects and impairment to park resources or values. The effects on floodplains and environmental justice are also briefly addressed.

Plan Implementation

The Presidio Trust and the NPS will develop specific site plans for individual trails and bikeways as they implement the management actions recommended in the Presidio Trails and Bikeways Master Plan. Site-specific planning will address precise trail configurations and locations, trail width, surface, signs, trailheads, slopes, drainage and other physical attributes. These improvements will be developed within the context of the broader vision, and best management practices identified in this plan. Additional compliance will be conducted as necessary.

Implementation Criteria

Individual trails and bikeways improvement projects will be implemented based on priority, phasing and funding. The Trust and NPS developed the following criteria for determining an implementation schedule:

1) Trails and intersections with safety concerns;
2) Trails and intersections with personal security concerns;
3) Trails currently causing natural resource and/or cultural resource damage;
4) Trails with accessibility concerns;
5) High use and highly desired trails;
6) Trails where other construction activity is occurring (i.e. areas such as Letterman);
7) Trail segments that complete corridor connections; and
8) Trails that provide an outside funding or matching fund opportunity.

Environmental Assessment

While the NPS and Trust have separate jurisdictional responsibilities in the Presidio and separate authority to approve, veto, or finance all or part of the Presidio Trails and Bikeways Master Plan (jurisdiction by law), the agencies collaborated in the preparation of this document to comply with the NEPA. According to the CEQ NEPA Regulations, an EA is a concise public document prepared by federal agencies when a proposed action is not covered by a categorical exclusion or otherwise exempt from the NEPA. Both the NPS and the Trust prepare EAs when they have insufficient information with which to determine whether a proposed action has the potential to cause significant environmental effects. The purposes of an EA are to provide evidence and analysis to determine whether an EIS is required, aid a federal agency's compliance with the NEPA when no EIS is necessary, and facilitate preparation of an EIS when one is necessary (40 CFR 1508.9(a)).

Chapter 2 of the Presidio Trails and Bikeways Master Plan contains a brief discussion of the need for the plan. Chapter 3 describes trail classifications and design guidelines. Chapter 4 identifies alternatives to the proposed action. The environmental impacts of the proposed action and alternatives are described in Chapter 5, and a list of agencies and persons consulted are provided in Chapter 6. Together, these chapters satisfy the required contents of an EA.

Both the NPS and Trust will use the EA to assist in their respective planning and decision-making. The Presidio Trails and Bikeways Master Plan/Environmental Assessment is a programmatic plan and EA. Proposed trail routes and designs have not been finalized in every instance, and some connections or routes may be subject to further planning and environmental review prior to implementation consistent with the provisions of the NEPA.

Army Museum

2 Purpose & Need

This chapter briefly explains the need for the *Presidio Trails and Bikeways Master Plan* and describes its purpose, goals, and objectives.

Project Need

The Presidio is a national park site used and enjoyed by the public for its open spaces, vistas, scenery, opportunities for active recreation and exercise, and for its contemplative settings. The majority of Presidio trails evolved over time. The Trails Plan is needed to guide the establishment of a well-functioning network of trails and bikeways, and to enhance the public's exploration and experience of the Presidio's open spaces and resources. The plan is also needed to improve connections between key features of the Presidio, increase accessibility, enhance visitor safety, and encourage use of alternative modes of transportation.

Under existing conditions, visitors and park users often find some Presidio trails and bikeways challenging and difficult to navigate. Trails and bikeways can be confusing or inconsistent, and can be the cause of environmental degradation. In certain areas, the trails are causing erosion, fragmenting native plant communities and wildlife habitat, disrupting natural seeps and drainage, degrading views, and damaging historic coastal fortifications.

There are approximately 19 miles of existing designated pedestrian and multi-use trails and bike lanes in the Presidio. There are many miles of additional unofficial trails that have been developed through informal use. These "social trails" criss-cross much of the Presidio, including natural areas and sensitive habitats. About nine miles of social trails have been mapped.

The General Management Plan Amendment (GMPA) directs the NPS to identify pedestrian and bicycle route improvements that support the Presidio's recreational, natural, cultural, and historic resource goals. The Presidio Trust Management Plan (PTMP) states that the Trust will improve pedestrian and bicycle routes in Area B to promote convenient, safe and enjoyable walking and bicycling. The Presidio Trails and Bikeways Master Plan is needed to provide trails and bikeways design guidelines, and identify unofficial trails that should either be closed or incorporated into the official trails network. The plan is also needed to address the significant increase in users over the last decade.

Project Purpose

The project is intended to establish a comprehensive trails and bikeways network in the Presidio, to effectively address the agencies' mandates for land and resource management, and to reflect the input received from the public and other agencies.

Goals

Working together, the NPS and Trust have developed goals for creating a safe and enjoyable Presidio trails and bikeways network. These goals are consistent with both the 1994 GMPA for Area A and the 2002 PTMP for Area B. The public scoping process helped further refine the goals and objectives. The five principal goals are:

1) Enhance public use, access, and experience;
2) Support resource preservation;
3) Contribute to a comprehensive transportation strategy;
4) Provide for sustainable design and construction; and
5) Promote ongoing public involvement through volunteer stewardship.

Enhance Public Use, Access, and Experience

The first goal of the Trails Plan is to accommodate a variety of recreational and educational activities, including walking,

running, cycling on a road or trail, rollerblading, dog walking, natural and cultural history exploration, and quiet contemplation. A cohesive, clear network of trails and bikeways should provide a variety of route choices and challenges as well as make desired connections throughout the Presidio for visitors, residents and tenants. Routes should travel through the Presidio's varied landscapes, including forests, coastal areas, the bayshore, and along historic buildings, batteries and other features. Accessible trails should be included where feasible. Access to views should be improved. Landscape buffer zones should be provided where trails travel along roadways to improve user experience. The public's experience should also be enhanced with information, services, shuttle stops, and, in some cases, automobile parking at trailheads. Trail classifications and design guidelines should provide consistent guidance for meeting the needs of diverse users.

User safety is an important component of visitor experience at the Presidio. Where feasible, separating pedestrian trails and multi-use trails from vehicular traffic lanes should improve visitor experience. Bike lanes along vehicular roads should be clearly marked. Signs should be provided to alert motorists to the presence of bicyclists and pedestrians.

Walkers Enjoying a Trail in the Historic Forest

The following objectives would support the goal of enhancing visitor use, access, and experience:

- Provide a variety of trail experiences to meet diverse user needs ranging from contemplative solo activities to active group recreation;
- Provide diverse interpretive and educational experiences;
- Create consistent, well-made and sustainable trails;
- Improve bikeways to minimize the potential for conflicts between pedestrians, bicyclists and cars;
- Promote safety and security on trails and roads and at intersections;
- Enhance the accessibility of trails and bikeways, and provide supporting facilities; and
- Improve access to views of outstanding natural and cultural features.

Support Resource Preservation

The resource preservation goal of the Trails Plan is focused on preserving the valuable natural and cultural resources that make the Presidio an outstanding national park site. Resource management objectives of both agencies include protecting sensitive plant and animal species, preserving unique cultural resources (including historic earthworks, batteries, buildings, and archeologic resources), and protecting unique cultural landscapes. The plan should propose trail

realignments, improved management and maintenance of trails, and specialized trails (such as permeable paving and boardwalks) to minimize impacts on natural and cultural resources.

The following objectives would support the goal of resource preservation:

- Coordinate and integrate trail design with natural and cultural resource planning;
- Upgrade or remove informal social trails (social trails are unofficial, informal paths or shortcuts that have been created over the years by consistent human use);
- Protect and enhance natural resources; and
- Protect and enhance cultural resources.

Contribute to a Comprehensive Transportation Strategy

Another plan goal is to promote alternative forms of transportation and discourage private automobile travel within and to the Presidio by enhancing alternative transportation connections. An attractive, well-functioning trail system that provides convenient connections between housing and work areas and is coordinated with transit and shuttle stops can increase use of alternative transportation modes. Additionally, trails and bikeways should connect to regional trails, such as the California Coastal Trail, the San Francisco Bay Area Ridge Trail, the Bay Trail, and the Juan Bautista de Anza National Historic Trail. Providing both loop trails and through trails should encourage pedestrian and bicycle use.

The following objectives would support the goal of contributing to a comprehensive transportation strategy:

- Establish a trails and bikeways network to make direct connections, link main activity and residential areas, and provide key connections to the City of San Francisco;
- Promote recreational and commuter bicycle use to, through, and within the Presidio as an alternative to automobile use;
- Provide a system of trailheads that includes bicycle and/or vehicle parking and corresponds to transit or shuttle stop locations; and
- Encourage alternative forms of transportation, and facilitate and coordinate movement from one form of transportation to another, including buses, shuttles, bicycles, and foot-traffic.

Encourage Sustainable Design and Construction

The Trails Plan is intended to be consistent with NPS and Trust goals for sustainability and environmental protection, and the plan has as one goal encouraging sustainable design and construction practices.

Prior planning recommendations call for park facilities, including trails and bikeways, to be designed, constructed, retrofitted, and operated to minimize adverse effects on natural and cultural resources and be reflective of their environmental setting.

The NPS defines sustainability as the capability of natural and cultural systems to maintain themselves over time (NPS 1993). Many factors affect trail sustainability, including management policies, design, construction techniques and maintenance. The following objectives would support sustainability:

- Minimize disturbance during and after construction;

Runners on the Golden Gate Promenade

- Design trails for durability, erosion control and minimal environmental impact;
- Use sustainable and renewable materials for trail construction, including both recycled and recyclable materials from the Presidio;
- Design low-maintenance trails, and coordinate trails and bikeways upkeep with a viable, high-quality maintenance program;
- Consider re-use of disturbed areas for trail alignments such as along existing roads and social trails.

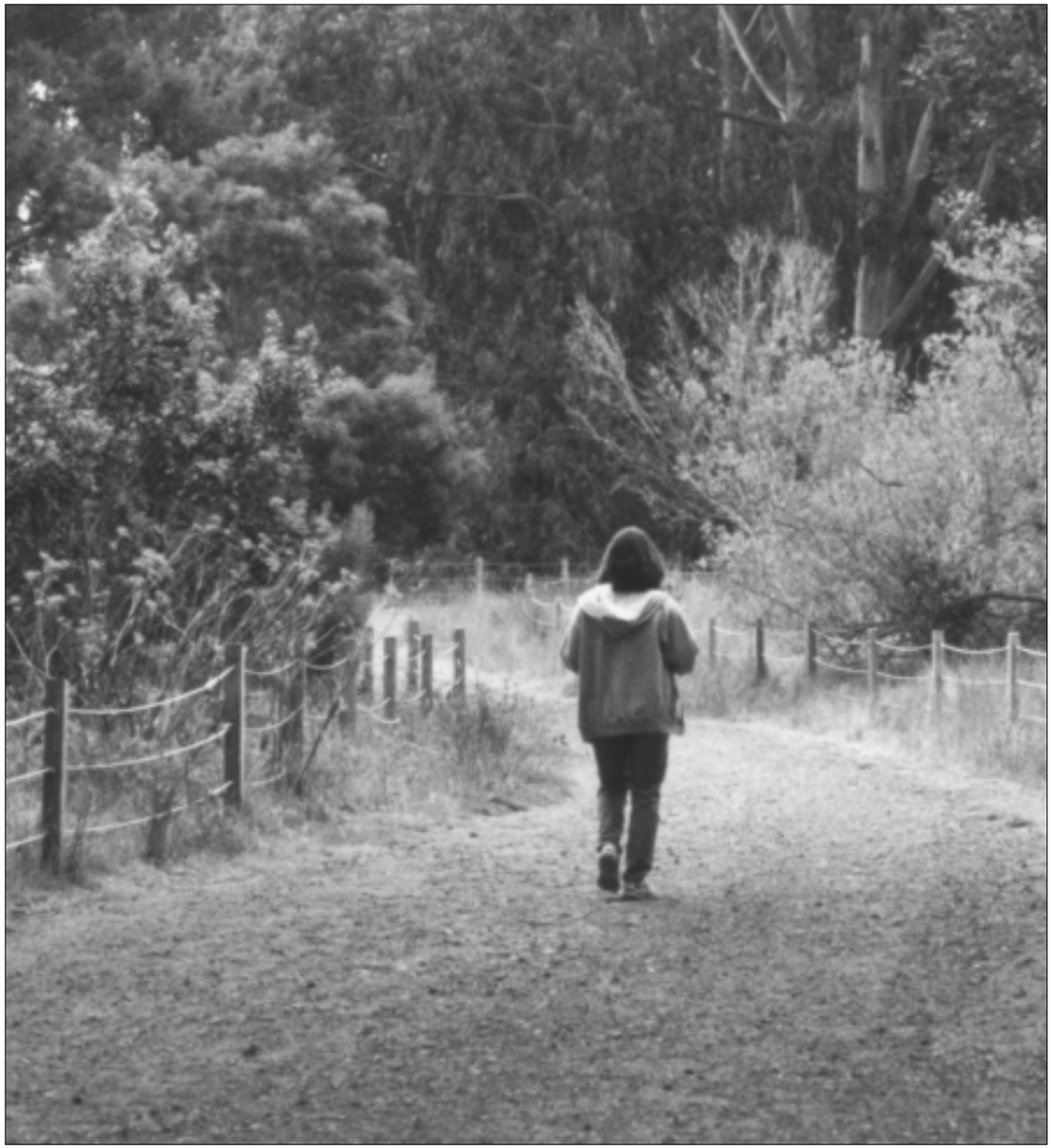
Promote Ongoing Public Involvement through Volunteer Stewardship

The final Trail Plan goal is to create an opportunity to develop long-term partnerships with community groups, schools, park neighbors, and other trail users.

Public participation provides opportunities for education and community involvement and may include funding, building, and maintaining trails, and monitoring their long-term use. Any long-term trail monitoring and maintenance strategy will require collaboration with visitors, neighbors, and volunteers.

To promote stewardship activities, key objectives include:

- Foster volunteer programs and other partnerships;
- Promote interagency cooperation and volunteer coordination; and
- Create training and educational opportunities.



3 Trail Classifications & Design Guidelines

This chapter describes the Presidio's trails and bikeways classification system and design guidelines including accessibility guidelines. The guidelines are intended to be flexible and anticipate that constraints defined by resource protection goals, safety, or topography will on occasion require an alternative trail design within identified corridors.

This chapter also summarizes the Best Management Practices (BMPs) that would be incorporated in all action alternatives. BMPs are trail construction techniques that incorporate resource conservation and management practices to avoid or minimize adverse impacts to natural and cultural resources. The trail BMPs are mitigation measures included in the action alternatives to avoid, reduce the severity of, or eliminate adverse environmental impacts from trail construction and maintenance activities.

User Groups

To ensure that all visitors are served, the needs of many different bikeway and trail users are addressed:

- Pedestrians of all kinds, from those seeking physically challenging walks to those who want a convenient connection between two activity centers. This group includes recreational walkers, commuters and exercisers of different abilities.

Cyclist on Arguello Boulevard

- Bicycle commuters who live or work in the Presidio or pass through the Presidio want a direct, easy-to-use route to their workplace. Most of these bicyclists would prefer bike lanes or low-volume roadways, and routes that minimize their travel time.
- Serious recreational cyclists who often are out for a long ride and are not intimidated by hills or traffic. This group usually prefers wide shoulders or bike lanes, but the lack of these facilities does not affect their choice of a route. Unlike bicycle commuters, this group puts more importance on riding a scenic route where they can ride fast, than they do on time-savings.
- Family or touring bicyclists, with or without children, who want to see the sights and the beauty of the Presidio. Their choice of routes is affected by traffic and hills, and just as importantly, the route's access to the Presidio's major attractions, such as the Golden Gate Bridge, Fort Point, Crissy Field, the Golden Gate Promenade, and the Visitor Center. They would prefer to be on multi-use trails or roadways with little or no traffic. Often these users may not ride at all unless bikeways meet these conditions.
- Skaters and skateboarders who are out for a recreational skate or ride can be accommodated on hardened pedestrian and multi-use trails.

Trails and Bikeways Classification System

The three basic trail classifications of the Trails and Bikeways Master Plan are pedestrian trails, multi-use trails, and bikeways.

Accessible trails, which apply to both pedestrian and multi-use trails, are described with “outdoor recreation access routes” which connect elements within sites such as trailheads, campgrounds and picnic areas, and “beach access routes” which link trails to the shoreline.

Table 3-1 summarizes major trail type characteristics and design guidelines.

	PEDESTRIAN TRAILS		MULTI-USE TRAILS	BIKEWAYS		WHEELCHAIR ACCESSIBLE TRAILS		
	Primary Trails	Secondary Trails	(Class I)	Striped Bike Lanes (Class II)	Shared Roadway (Class III)	Pedestrian or Multi-use	Outdoor Recreation Access Route	Beach Access Route
Description	Major interconnected routes to provide access to important Presidio destinations	Secondary routes to provide users access to specific cultural, historical, natural, and scenic resources	Major routes between destinations for pedestrians, slower-speed recreational cyclists, and other users as a shared trail separated from auto traffic	Bike lanes on each side of the roadway or uphill bike lane only	Shared routes (auto and bicycle) on service roads and low auto volume roadways	Accessible portions of pedestrian and multi-use routes	A continuous, unobstructed path that connects accessible elements within a picnic area, campground, or designated trailhead	An accessible route to link nearby main trail routes to some of the Presidio's important coastal beaches
Surface	Soft surfaces and hard surfaces	Soft surfaces and hard surfaces	Generally hardened surfaces with buffers, which are soft-surface walking or running paths	Pavement	Pavement surfaces may be upgraded	Firm, stable and slip-resistant	Firm, stable and slip-resistant	Boardwalk or other firm, stable and slip resistant surface
Width	Between 1.2 m and 1.8 m (4 to 6 ft)	Typically narrower than primary trails and between 0.6 m and 1.2 m (2 to 4 ft), except 0.9 m to 1.5 m (3 to 5 ft) for accessible trails	From 2.4 to 3 m (8 to 10 ft) hardened surfaces and 0.6 m (2 ft) buffer on both sides	Typically 1.5 m (5 ft) wide; steep uphill segments may be wider; minimum of 1.5 m (3 ft) where design conditions allow	NA	1.5 m (5 ft) or greater with a minimum of 0.9 mm (3 ft)	At least 1.5 m (5 ft) wide	At least 1.5 m (5 ft)

Table 3-1. *Trails and Bikeways Classification*

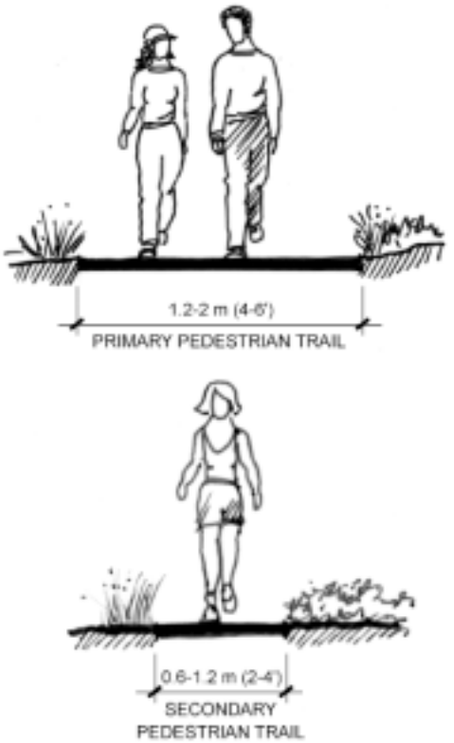


Figure 3-1. *Pedestrian Trails*

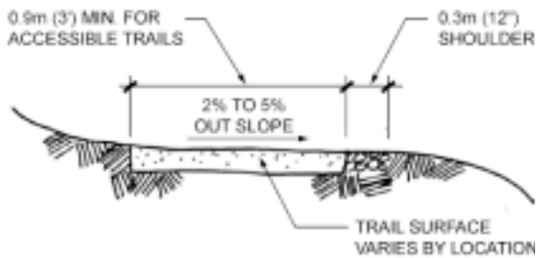


Figure 3-2. *Pedestrian Trail Detail*

Pedestrian Trails

The plan classifies pedestrian trails as primary or secondary (Fig. 3-1).

- Primary trails occur in the major trail and road corridors, and provide connecting routes to important Presidio destinations. Wider trails accommodate a larger number of trail users.
- Secondary trails offer visitors, residents, and tenants the opportunity to experience many of the Presidio's environments and the many cultural, historical, natural and scenic resources.

In all action alternatives, primary and secondary pedestrian trails would be designed for a wide range of pedestrian use (Fig. 3-2). Typically, secondary trails would be soft-surfaced, single-track footpaths, while primary trails would be wider and hard-surfaced. Both would have firm, slip-resistant surfaces.

Surface

Surfaces would be designed to encourage users to stay on trails, avoid erosion, and to maintain soil cover over tree and other plant roots.

Depending on the intended use of the trail, underlying soil, and nearby resources, trail surfaces

Sidewalks and Designated Trails

There are many sidewalks throughout the Presidio. Many of these sidewalks are not part of the proposed designated trails system. The Presidio Trails and Bikeways Master Plan designates trail corridors, which include segments of, but not all, Presidio sidewalks. Presidio visitors are free to use any sidewalks available, beyond those that are designated as specific trails.

A Presidio Sidewalk

Social Trails

The classification system does not include social trails, which are unofficial, unplanned, informal paths or shortcuts that have been created by consistent human use. Over 9 miles of social trails have been mapped, and many more exist. In some cases, these unplanned and non-maintained trails cross through areas of fragile natural and cultural resources. Although they may appear no different than other trails to users, social trails tend to have a greater impact on natural, cultural, and historic resources than other routes that were designed and constructed as trails. Since there are many social trails in the Presidio, they figure in each action alternative. All action alternatives include the following social trail recommendations:

- Upgrading some social trails to an official pedestrian or multi-use trail, including making improvements to reduce impacts to park natural and cultural resources, increase visitor safety and enjoyment, and increase accessibility for persons with disabilities.
- Closing many social trails to increase visitor safety and/or protect Presidio natural, cultural, and historic resources.
- Replacing some social trails with a designed trail in the same general area to maintain important connections while enhancing public safety and resource preservation.

could be soft (permeable) or hard (with varying degrees of permeability). For example, the trail surface might be on boardwalks, designed to protect resources or provide access in areas with unstable surfaces, such as beaches or sandy soils.

Examples of soft surfaces include soil, crushed rock, sand, mulch, and rubber-based paving. Hardened surfaces include asphalt (permeable or impermeable), concrete, crushed rock or soil stabilized with resin products or cement, and open or solid masonry such as brick, "Turf-block" or other cast concrete products. Other hard surfaces include boardwalks, bridges, steel grates or plates.

Width

Pedestrian trails would vary in width. Typically, clear tread widths of trails could range from 0.6 meters to 1.8 meters (2 feet to 6 feet).

Grades

Pedestrian trails would be designed with grades ranging from flat to steep, to provide trail users with a variety of challenges. In general, steep trails would have hardened surfaces to avoid erosion, and boardwalks would have easy grades. Pedestrian trails may include stairs or bridges.

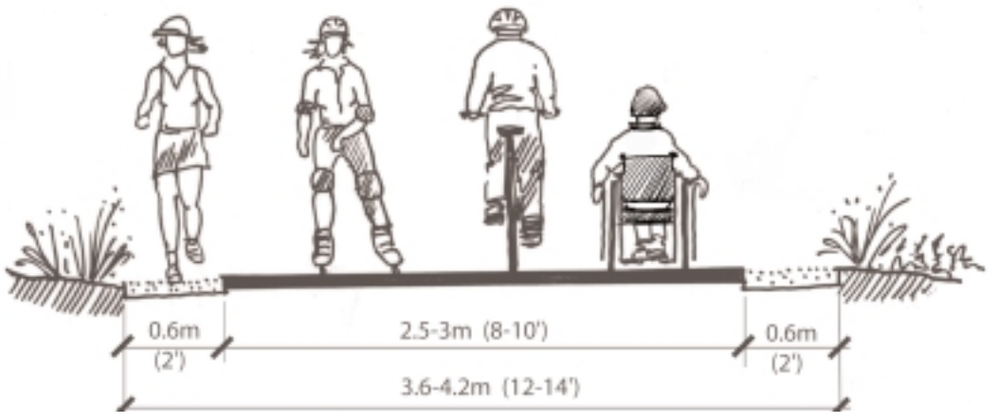


Figure 3-3. *Multi-use Trail*

Buffers

Where feasible and appropriate, a planted or constructed buffer would separate pedestrian trails from roadways.

Access

Both the proposed pedestrian and multi-use trail network would also increase trail accessibility for people with disabilities, although not all pedestrian and multi-use trails would be fully accessible because of steep grades and other constraints.

Multi-use Trails

Multi-use trails offer safe, enjoyable opportunities to travel through the Presidio for pedestrians, slower-speed recreational or family bicyclists, non-motorized wheeled sports users and groups with a combination of the above (Figure 3-3). These trails would provide major connections between important Presidio destinations, entry gates, and other local, regional, and national trail systems. Multi-use trails are the same classification as CalTrans Class I bikepaths (CalTrans 2001).

All multi-use trails proposed in this plan would be designed to meet or exceed the minimum design standards of American Association of State Highway and Transportation Officials (AASHTO 1999). Where width is available, facilities will be designed to meet recommended rather than minimum widths. Exceptions will be considered where a facility is unable to meet the minimum AASHTO design standards due to constraints related to topography, natural or cultural resources, or other factors. Consideration will include an evaluation of the potential impacts and benefits of the project and development of a context-sensitive solution, including design elements to minimize impacts and to provide a safe non-standard facility.

Multi-use trails would be located on existing former roadways, or in previously developed areas whenever feasible. All new multi-use trails would be designed to minimize impact to natural or cultural resources. Some former service roads currently used as informal, multi-use trails would be developed as official multi-use trails.

Surface

Multi-use trails generally have hardened surfaces and adjacent soft-surface buffers that can be used as walking or running paths. Hardened surfaces for most multi-use trails could consist of asphalt or granular aggregate material stabilized with a binder. Soft-surface portions could be fine granular stone (crushed rock or decomposed granite). Trails for skaters would need a smooth, paved surface.

Width

Typically, multi-use trail corridors would range from 3.6 meters to 4.2 meters (12 feet to 14 feet) wide. The trail corridor would have a hard surface, 2.4 meters to 3 meters (8 feet to 10 feet) wide, with 0.6 meters (2 feet) wide soft-surface buffers on both sides. The preferred clear tread width of hard surfaced multi-use trails is 3 meters (10 feet). Multi-use trails with less use can have a width of 2.5 meters (8 feet).

Grade

In general, multi-use trails would have easy grades. Minimum running slopes of no more than 1:20 (5 percent) provide greater accessibility for persons with disabilities and bicyclists. Where steeper grades are needed, the AASHTO guidelines would apply. Where feasible, cross slopes would be kept to a minimum of 1:50 (2 percent), unless a curve requires a greater cross-slope for safety or to ensure proper drainage (Figure 3-4).

Edge Protection

Some types of edge protection, such as raised surface elements, curbs, or rails that are immediately adjacent to the paved surface, may be of concern to bicyclists and skaters. Proposed multi-use trails would consider the special safety needs of these users by providing a wide path of travel away from curbs or rails.

Obstacles

Bicyclists have a higher vertical profile than do other trail users. For this reason, a minimum of 3 meters (10 feet) vertical clearance would be provided on multi-use trails. Tread obstacles such as steps or waterbars would typically be avoided on multi-use trails. Openings large enough to permit wheelchair or bicycle wheels to enter would be avoided. Drainage grates may be located outside the trailbed. Where this is not feasible, grates would be designed for wheelchair and bicycle safety. For example, grates that use small openings perpendicular to the path of travel would be selected.

Buffers

Where feasible and appropriate, a planted or constructed buffer would separate multi-use trails from roadways.

Bikeways

Nearly all Presidio roads (whether they have pavement markings or not), are currently open for bicycle use. In the Trails and Bikeways Master Plan, Presidio bikeways would continue to make important connections to City of San Francisco bicycle routes and other local and regional bikeways.

Bikeway classifications used in this plan are consistent with federal guidelines (AASHTO 1999). However, many Presidio bikeways connect to bikeways and bike routes outside the park. For this reason, and to provide information in a context that is familiar to most readers, the plan also identifies Caltrans bikeway classifications for each type of bikeway (Caltrans 2001). Only on-street facilities (Class II and III bike routes) are considered in this classification. Class II bikeways are marked on-street bike lanes. Class III bikeways indicate a signed bike route where bikes and cars share a lane. Off-street bikeways (Class I) are addressed as multi-use trails. Only designated bikeways are mapped in this plan, although nearly all roadways in the Presidio would continue to be open to bicycle use.

Road width constraints are the primary determinant for the type of bikeway provided. Where possible, striped bike lanes would be provided on both sides of major roads. In a few instances where road width is constrained, only uphill bike lanes are proposed. Striped wide shoulders may be appropriate for Class III bike routes on shared roadways where width constraints preclude bike lanes. On some low-volume streets, bicyclists would continue to share roadways with motor vehicle traffic without lane or shoulder marking. In some

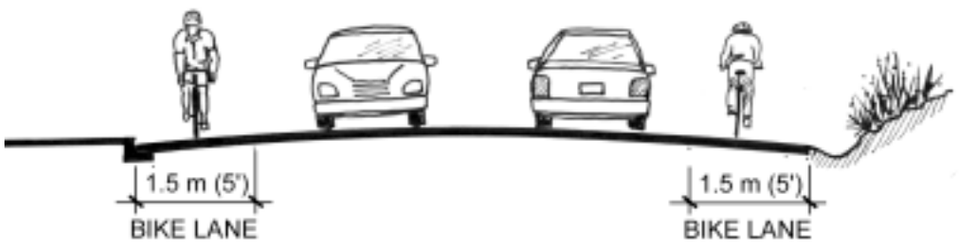


Figure 3-4. *Typical Bike Lanes on Roadway*

instances, roadways would be incrementally widened to provide a safe bikeway in each direction.

Presidio bikeways would provide a range of difficulty, from easy to challenging. All action alternatives would improve roadway safety for bicyclists, and ensure that there are no gaps in the bicycle circulation network.

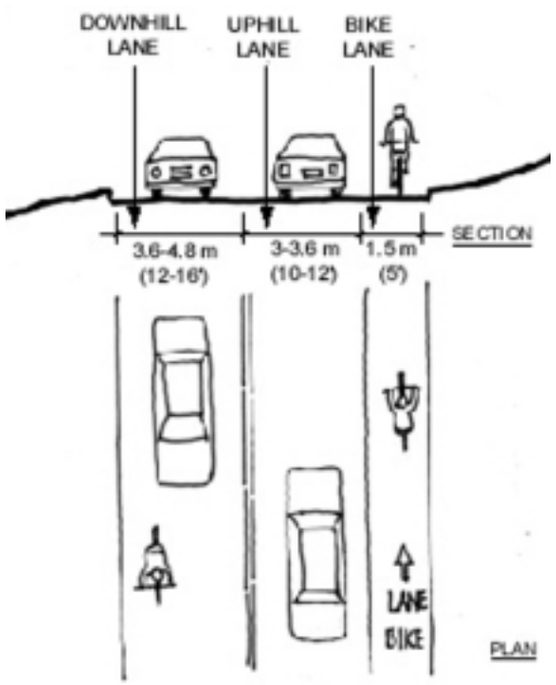


Figure 3-5. *Uphill Bike Lane*

Bikeway Design

All bikeways proposed in this plan would be designed to meet or exceed the minimum design standards of AASHTO 1999. Where paved width is available, facilities will be designed to meet recommended rather than minimum widths. Exceptions will be considered where a facility is unable to meet the minimum AASHTO design standards due to constraints related to topography, natural or cultural resources, or other factors. Consideration will include an evaluation of the potential impacts and benefits of the project and development of context-sensitive solutions, including design elements to minimize impacts and to provide a safe non-standard facility.

The Trails Plan recommends bikeways to accommodate all bicycle user groups, conform to roadway constraints, and accommodate varied traffic volumes on roadways. These recommendations address major streets used mainly by experienced cyclists – such as Presidio Boulevard and Lincoln Boulevard – as well as roads used by family and recreational cyclists. Providing continuity on street-based bikeways for recreational cyclists is challenging. Some cyclists will not use busy roadways to fill gaps in their routes. Therefore, some multi-use trails would be provided along busy roadways, such as Lincoln Boulevard. All action alternatives include the following bikeway design guidelines:

Contraflow Cyclist on One-way Segment of Lincoln Boulevard

Figure 3-6. *Shared Roadway*

- *Marked bike lanes on each side of the roadway (Class II):* Bike lanes 1.5 meters (5 feet) wide or greater are preferred. AASHTO guidelines allow for narrower bike lanes in certain circumstances. Bike lanes would be provided and striped on each side of the roadway (Figure 3-5).
- *Marked bike lane in the uphill direction only (Class II):* In constrained sections on sustained grades – for example, on Arguello Boulevard and Presidio Boulevard – to provide bike lanes in both directions without widening the road, an uphill bike lane would serve as a climbing lane for bicyclists (Fig. 3-6). Downhill bicyclists would be permitted to use the signed, full traffic lane with cars. Bicycles can achieve the same or nearly the same speed as motor vehicles. In addition, it can be unsafe to confine fast-moving downhill bicyclists to a narrow bike lane at higher speeds.
- *Marked bike lanes on one-way streets (Class II):* Since Presidio streets are not laid out in a grid pattern, some existing one-way road sections require bicyclists to travel significantly out of their way. This encourages some bicyclists to ride against traffic. Circulation for bicycles in both directions is needed on some of these one-way sections. As an example, a short segment of Lincoln Boulevard near the Main Post currently is striped to have a "contraflow" (against the direction of auto traffic) bike lane. Contraflow and with-flow bike lanes would be considered for the one-way sections of Crissy Field Avenue, and Washington Boulevard between Kobbe Street and Lincoln Avenue.
- *Shared roadway (Class III bike routes):* Some roadways and service roads have low traffic volumes that are not likely to increase in the future. On those roads, bicyclists and motorists can share the road without marked bike lanes and/or shoulders (Figure 3-7). These segments are often short and traffic speeds are correspondingly low. In these cases, the roadway would be signed as a bike route. Signage per AASHTO guidelines or state motor vehicle code would notify motorists that bicyclists are allowed full use of the lane.

Surface

Typically, bikeways would occur on existing pavement. If roads were widened to accommodate bikeways, the new bikeways would be constructed of the same material as the roadway. Where feasible, bikeways would be designed with smooth surfaces and would be free of obstacles such as drainage inlet grates. Grates in bikeways will be to Caltrans Standard Plan D778B.

Grade

Bikeway grades would follow existing roadway grades and vary from nearly flat to very steep.

Signs

Bikeways would be signed to indicate appropriate usage for cyclists and motorists.

Buffers

Class II bike lanes would be separated from motor vehicle traffic by bike lane markings rather than raised pavement markings or raised barriers, because those can cause steering difficulties for bicyclists.

Accessibility

In this plan "access" and "accessibility" refer to the provision of opportunities for people of differing abilities to travel to a site or along a trail. The ADA Accessibility Guidelines (ADAAG) provide a set of uniform design requirements that ensure access to public and commercial spaces. These guidelines already provide general

technical requirements for public and commercial facilities, such as restrooms, parking, and accessible routes of travel that also apply to recreation facilities. The Federal Access Board has published new guidelines for accessible trail construction and trail rehabilitation, which will be incorporated into the existing ADAAG guidelines (Regulatory Negotiation Committee 1999). The guidelines provide additional guidance specific to trails that address the slope and cross-slope of the trail, resting intervals and passing areas, the width and stability of trail surface, and signs that alert visitors with disabilities to trail conditions. These guidelines apply to the pedestrian trails and multi-use trails proposed in this plan's action alternatives and would apply where feasible. The following are instances where these guidelines would not be feasible:

- If compliance would cause substantial harm to cultural, historic, or significant natural features or characteristics;
- If compliance would substantially alter the nature of the setting or the purpose of the trail;
- If compliance would require construction methods or materials that are prohibited by law; or
- If compliance would not be feasible due to terrain or prevailing construction practices.

If a trail cannot meet the guidelines because of any of the above exceptions, efforts would be made to ensure that as much of the trail as feasible is accessible. These exceptions allow steep trails or trails with steps to be developed in some areas where existing conditions prohibit constructing accessible pedestrian trails. Signage at trailheads would provide information about trail conditions to visitors with disabilities.

Accessible Trails

Accessible pedestrian and multi-use trails would meet these additional requirements:

Surface

Soft surfaces will be stabilized to provide increased trail accessibility. Trails can be stabilized using amendments of crushed rock, fine granular stone (also referred to as crushed rock or decomposed granite), or recycled materials to strengthen and improve the natural surface. Hard surfaces may include soil treated with soil stabilizers, asphalt, concrete, or boardwalk (wood, recycled wood, or plastic lumber).

Width

The minimum width of accessible trails is 0.9 m (3 feet). When trails have less than 1.5 meters (5 feet) of clear tread width, passing spaces will be provided at least every 300 meters (1000 feet). Boardwalks will have a minimum clear tread width of 1.5 meters (5 feet).

Grade

No more than 30 percent of the total length of a designated accessible trail will exceed a running slope of 1:12 (8.3 percent) or have a cross slope greater than 1:20 (5 percent). In general, the running slope of an accessible trail would be less than 1:20 (5 percent), however, steeper trails could be considered accessible in the following conditions:

- Maximum “running slope” (in the direction of travel) of 1:12 (8.3 percent) for 60 meters (200 feet) with resting intervals.
- Maximum running slope of 1:10 (10 percent) for 9 meters (30 feet) with resting intervals.
- Maximum running slope of 1:8 (12.5 percent) for 3 meters (10 feet) with resting intervals.

Resting Intervals

Due to the Presidio's steep terrain, existing trails have running slopes close to the maximum for accessible trails. Resting intervals, properly spaced, provide a greater degree of accessibility for persons with disabilities. These resting areas would be at least 1.5 meters (5 feet) long and as wide as the trail, with a preferred cross slope of 1:50 (2 percent) and a maximum cross slope of 1:20 (5 percent).

Edge Protection

Edge protection is often provided on trails to increase safety. If it is provided, it would be at least 75 mm (3 inches) high. A lower surface might not be obvious or detectable to people with limited vision who use canes.

Obstacles

The presence of any of the following obstacles would prevent a pedestrian trail from being a designated accessible trail and should be minimized:

- Openings in trail surfaces that allow the passage of a 13 mm (fi inch) diameter sphere, or elongated openings that are parallel to the dominant direction of travel that allow the passage of a 6.5 mm (⁄ inch) diameter sphere.
- Protruding objects, for example signs, that are less than 2 meters (80 inches) above the trail surface.
- Tread obstacles such as water bars greater than 50 mm (2 inches) high. On trails with running slopes and cross slopes less than 1:20 (5 percent), tread obstacles, even those with beveled edges, should not be greater than 75 mm (3 inches) high.

Outdoor Recreation Access Routes

An outdoor recreation access route is a continuous, unobstructed path designated for pedestrian use. It connects accessible elements at picnic areas, campgrounds, designated trailheads, and designated overlooks. These routes would be provided in all action alternatives. In general, the recommendations for outdoor access routes are identical to those for accessible trails, with the following exceptions:

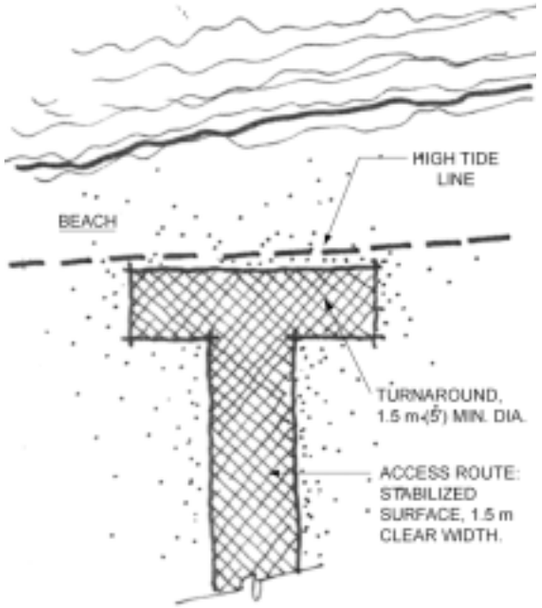


Figure 3-7. *Beach Access Route (Plastic Mat Option)*

- Passing spaces would be provided at least every 60 meters (200 feet) when trails have less than a 1.5 meter (5 feet) clear tread width.
- Cross slopes of these routes would not exceed 1:33 (3 percent) except in areas where steeper cross slopes are necessary to ensure proper drainage. Those cross slopes would not exceed 1:20 (5 percent).
- Maximum running slope would be 1:20 (5 percent).
- No surface obstacles greater than 25 mm (1 inch) high would be permitted, or 50 mm (2 inches) if the edges of the obstacle are beveled.

Beach Access Routes

Beach access routes link nearby main trail routes to the high tide line (Fig. 3-8). They would be provided in all action alternatives in

A Presidio Overlook at Dusk

this plan. These routes would provide access near the high-tide line at Baker Beach and Crissy Field. In general, the recommendations for beach access routes are identical to those for outdoor access routes, with the following exceptions:

- Maneuvering, resting, and viewing spaces would be provided at the high-tide level, normal recreation water level, or at the end of each beach access route. These spaces would be at least 1.5 meters by 1.5 meters (5 feet by 5 feet) and would not overlap with the route.
- Curbs, walls, or edge protection at least 50 mm (2 inches) high would be provided if the drop-off from the route to the beach is greater than 150 mm (6 inches). If the drop-off is less than 150 mm (6 inches), but greater than 25 mm (1 inch), the route edge would be beveled.

Trail Features

There are three trail features common to each of the three action alternatives – overlooks, trailheads, and trail signs.

Overlooks

Overlooks provide opportunities for park visitors to pause and enjoy a spectacular natural feature, observe wildlife, or take in a unique view of an impressive structure or building. Primary overlooks would be located along Presidio roadways. In some cases, an overlook might also function as a trailhead. Primary overlooks would include such facilities as:

- Automobile parking, including parking spaces reserved for persons with disabilities;
- Interpretive signage;
- Access to site elements;
- Places to sit; and
- Other amenities, such as trash receptacles and bike parking.

Secondary overlooks would occur on trails without auto access. These secondary overlooks would be designed to take advantage of unique viewpoints resulting from trail alignment and topography. These "off the beaten track" overlooks are intended as quiet places of solitude.

Most overlooks would be accessible to persons with disabilities. This plan considers making improvements to existing overlooks and their viewing areas, and developing new accessible overlooks. If viewing areas are provided on designated overlooks, each viewing area would have at least one wheelchair maneuvering space with a firm and stable surface. The following specific requirements would apply:

- The maneuvering space would have a minimum dimension of 1.5 meters (5 feet) diameter and typically 1:50 (2 percent)

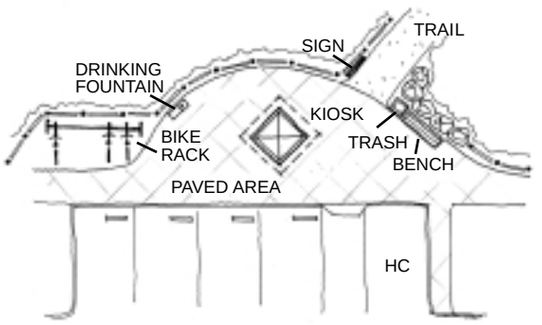


Figure 3-8. *Primary Trailhead*

slope in any direction (in areas where a steeper slope is necessary to ensure proper drainage, a 1:33 or 3 percent slope would be permissible);

- Overlooks would provide at least one unrestricted viewing opportunity for each distinct point of interest at a height between 0.8 m (32 inches) and 1.3 m (51 inches).

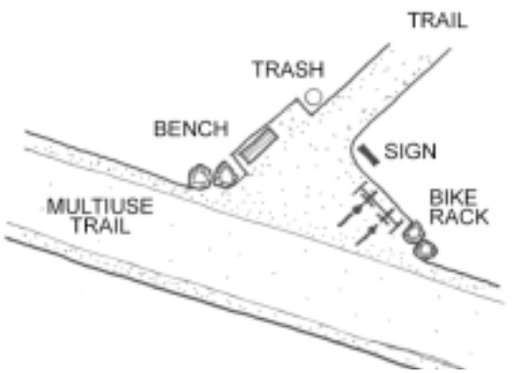


Figure 3-9. *Secondary Trailhead*

Trailheads

Trailheads typically serve as multi-modal transfer points, allowing users to change from transit or auto to bicycle or foot; or from bicycle to foot. Trailheads would provide trail information and user amenities where appropriate. Trailheads would incorporate many, if not all, of the following elements:

- Convenient access to shuttle and/or transit stops;
- Automobile parking, including parking spaces reserved for persons with disabilities;
- Secure bicycle parking (racks or lockers);
- Wayfinding kiosks, with orientation and interpretive information;
- Standard trail signs with information regarding trail conditions and degrees of difficulty;
- Drinking water;

Figure 3-10. *Existing Trail Marker, Bay Area Ridge Trail*

- Restrooms or directions to restrooms;
- Scenic viewpoints or overlooks;
- Places to sit; and
- Staging or gathering spaces.

The plan includes two trailhead types, primary and secondary. Both types would be located where they would provide access to major trail starting points, to locations where major trails converge, and to the starting points of accessible trails.

Primary trailheads include automobile parking and most of the elements listed above (Fig. 3-9).

Secondary trailheads would provide a limited set of standard components, such as trail information and bicycle parking (Fig. 3-10). These trailheads would not provide auto parking, and would be most appropriate for changing the mode of travel from bicycle to foot.

Trail Signs

Several types of trail signs would be used in the action alternatives to provide visitors with information about directions, trail conditions, and trail locations. In the No Action Alternative, existing signage would be used (Fig. 3-11).

Signage would comply with NPS and Presidio Trust sign guidelines. The Presidio is within the National Historic Landmark District and signs would be subject to review under the National Historic Landmark Preservation Act (NNPA). Signs would be designed and sited to avoid adversely affecting the features that contribute to the landmark status of the Presidio, and to be compatible with, and sensitive to, the Presidio's historic character.

Trailhead Signs. Trailhead signs would be located at the starting points of trails and at key intersections of major trail corridors. These signs may provide some or all of the following information:

- Name of the trail;
- Running and cross slope;
- Clear tread width;
- Trail surface characteristics;
- Distance to points of interest; and
- Trail elevation change.

Designated accessible trails would display the international symbol of accessibility.

If the trail is not accessible it will be signed "Not Accessible" at the trailhead.

Directional Signs. Directional signs would be located at key trail intersections and indicate the direction to major park destinations and trails.

Trail Markers. Trail markers similar to the Bay Area Ridge Trail markers, would identify each trail along its entire route. The post signs would include:

- A trail logo identifying the particular trail;
- A trail symbol indicating permitted trail use(s); and
- A direction indicator.

Best Management Practices

Best Management Practices (BMPs) are trail construction techniques that incorporate resource conservation and management practices. The techniques are included in the project to avoid or minimize adverse impacts on natural and cultural resources, increase trail safety, and minimize user conflicts. BMPs can include schedules for activities, regulations, maintenance and design guidelines, and other trails and bikeways management practices. The BMPs are intended to supplement, not replace, existing NPS/Trust trail management and maintenance practices. The proposed BMPs are the same for all action alternatives (B, C, and D), and are based on the principle that avoidance of sensitive resources, such as wetlands, special status species, or archeological sites is a top priority of both agencies. In the future, knowledge gained through operational experience and technological advances would be used to refine and improve the BMPs.

The BMPs would apply to all action alternatives. The No Action Alternative would continue current maintenance and management practices. The BMPs are divided into ten general categories:

1) Drainage control;
2) Trails in wet areas;
3) Trails on steep cross slopes;
4) Trails on flat grades;
5) Eroding and hazardous trail edges;
6) Trails on sandy soils;
7) Trails damaged by vehicle use;
8) Road-based user conflicts;
9) Social trail closures;
10) Trails in proximity to sensitive resources;
11) Air quality; and
12) Natural resource conservation measures.

4 Alternatives

This chapter describes the four trails and bikeways alternatives being considered, and summarizes the similarities and differences between the alternatives. Existing designated trail corridors are described, along with proposed changes and new trail corridors. In addition, the overall trails and bikeways networks for each alternative are described and illustrated.

ALTERNATIVE DESCRIPTIONS

Three action alternatives have been identified that would meet the project purpose and need, as well as the goals and objectives outlined in Chapter 2. In order to meet all of the goals and objectives within all of the alternatives, the action alternatives use similar strategies to improve the trail system, and differ primarily in the type of user experience they provide.

No Action Alternative

Alternative A is the No Action Alternative, which represents the Presidio's current trails and bikeways network. The No Action Alternative is distinct from the other alternatives in that it assumes that no comprehensive changes or major new trail building would take place for the next 20 years.

The Action Alternatives

Alternatives B, C and D are the Plan's action alternatives:

- Alternative B: Mixed Use (Preferred Alternative)
- Alternative C: Shared Use
- Alternative D: Dispersed/Single Use

All of the action alternatives would provide a wide range of differing experiences, from quiet solitude to an urban promenade experience. Action alternatives would create strong connections between the entrances and major points of interest, and allow various opportunities for travel between these points.

Improved connections between residential areas, employment centers, and transit stops would help reduce the number of automobile trips within the Presidio, and provide safer and more convenient routes for residents, employees, neighbors, and visitors. Primary trailheads would be located at high use areas with automobile parking. No parking areas would be provided at secondary trailhead locations.

All action alternatives would increase opportunities for access to, and/or interpretation of, historic and cultural resources. For example, trail destinations include places such as El Polin Springs, Fort Scott, historic sites at the Main Post, and the Presidio Stables, which are all important to the Presidio's history. Better access is proposed to Fort Point from the Golden Gate Bridge Plaza, as well extending the Golden Gate Promenade to the Fort. Historic batteries along the coast, including Batteries Cranston, McKinnon-Stotsenberg, Godfrey, Crosby, and Chamberlin, would be connected by the trail system. A new trail would be routed alongside Battery McKinnon-Stotsenberg to increase opportunities for interpretation. An existing trail would be rerouted around Battery East to prevent further degradation of the historic earthworks there. Rehabilitation of the Lovers Lane trail would reveal that portion of the Presidio's history.

In addition, all action alternatives would include the following:

- Trailhead locations which are coordinated with shuttle stops.
- Multi-use paths for regional trails including the Bay Area Ridge Trail, Anza National Historic Trail, the San Francisco Bay Trail and American Discovery Trail (a shared alignment) and the California Coastal Trail.
- Pedestrian trails separated from the roads in many areas, to provide opportunities for solitude.

- A comprehensive network of on-street bikeways.
- Approximately half of the mapped 9+ miles of social trials will become designated trails, and half will be restored to vegetated open land.

All action alternatives propose about 30 miles of newly designated trails; however the alternatives provide substantially different user experiences. The alternatives vary in the proposed amount of pedestrian trail versus multi-use trails, and how those miles are dispersed throughout the Presidio.

In the text and illustrations which follow, the alternatives are described in two ways: first by describing principal trail corridors, and second by describing the entire network of trails, divided into pedestrian, multi-use, and bike trails. In some cases, trail corridors follow existing trails, such as the Anza Trail, or the Bay Area Ridge Trail. In other cases, the trail corridors are "new." New corridors may not require construction of new trails, but instead involve designation and improvement of existing, disconnected trails or social trails as a named, continuous corridor. Generally, new corridors would require some improvement of social trails to provide a consistent, connected experience. All alternatives use the same named trail corridors, and differ only in the treatment of the trails within those corridors. There are additional trails that connect the named corridors, and these also vary within each alternative.

CHANGES TO EXISTING TRAIL CORRIDORS

California Coastal Trail Corridor

The existing California Coastal Trail will eventually traverse the entire Pacific coastline of California. The 4.8 kilometer (3 mile) section through the Presidio travels along the coastal bluffs, which support some of the most intact natural habitat in the Presidio and provide expansive views of the Pacific coastline. The trail provides access to gun batteries built in the 1890s for coastal defense and abandoned after World War II. The batteries are scattered along the bluffs from Golden Gate in the north to Battery Chamberlin at Baker Beach.

Currently classified as a pedestrian trail and City Bike Route, the trail is accessed from the Golden Gate Bridge Plaza, Battery Godfrey parking area, and Baker Beach. No formal trailheads exist.

At its north end, the trail merges with the Bay Area Ridge Trail as it approaches the Golden Gate Bridge. Widths vary from 0.9 meters to 2.4 meters (3 feet to 8 feet). The trail surface also varies from bare earth to gravel on portions that are used as maintenance roads.

The middle section of the trail is a narrow 0.6 meters to 1.5 meter wide (2 feet to 5 feet) dirt path immediately adjacent to Lincoln Boulevard. At the southern end near Baker Beach, the trail drops down to the ocean on an existing gravel maintenance road, connecting to Battery Chamberlin and the parking area. A parallel social trail exists immediately west of the guardrail on Lincoln Boulevard.

The Coastal Trail is also City of San Francisco Bike Route #95. This bike route enters the Presidio at the 25th Avenue Gate and travels along Lincoln Boulevard to Merchant Road and the Golden Gate Bridge, primarily as a Class III shared roadway.

Proposed Improvements

All action alternatives propose the following improvements where feasible, given topography and other factors:

- New trailheads at the bridge plaza, and at the 25th Avenue Gate.
- A new multi-use trail on the west side of Lincoln Boulevard.
- Reconfigure Bowman Road as a new multi-use trail east of Batteries Cranston and Marcus Miller, connecting to the Golden Gate Bridge.
- A new multi-use trail along Bowley Street.
- A new multi-use loop trail at Battery Chamberlin and Baker Beach.
- A new bikeway on either side of Lincoln Boulevard (SF bike route #95) from the Golden Gate Bridge to the 25th Avenue Gate.
- A new direct bike route to the Golden Gate Bridge via a multi-use trail.

Variations Between Alternatives

In addition to the above, Alternatives B and D would provide:

- Redevelopment of the existing pedestrian trail west of Batteries Cranston and Marcus Miller.

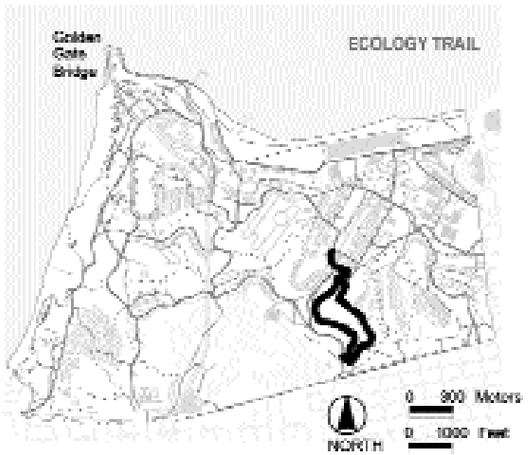
Alternative C would provide:

- Closure of the pedestrian trail to the west of the coastal batteries.

Alternative D would provide:

- A new pedestrian trail from the Golden Gate Bridge to the Lincoln Boulevard and Ralston Street intersection.

Ecology Trail Corridor



The existing Ecology Trail is a low slope 3.2 kilometer (2 mile) hike that provides access to some of the less developed areas of the Presidio. The trail begins behind the Officers' Club at the Main Post, and travels through a forest of eucalyptus, cypress, and redwoods to the overlook at Inspiration Point. From there the trail loops past serpentine grassland supporting endangered plant communities, to Quarry Road and back to the Main Post. A spur connects to El Polin Springs.

Informal social trail access is available at the north end from a hidden parking lot at Funston Avenue and Hardie Street. Informal social trail access also is available from Barnard Avenue near Pop Hicks Field. Access from the south is provided at Inspiration Point and at several points along West Pacific Avenue.

In its existing configuration, the upper section of the corridor is a packed earth pedestrian trail ranging from 0.9 meters to 3 meters wide (3 feet to 10 feet). The lower section runs along the abandoned Quarry Road alignment. Inspiration Point and El Polin Springs are major destinations.

Bicycles are not permitted on any portions of the Ecology Trail. With no trail controls, however, bicyclists currently use the trail.

Proposed Improvements

All action alternatives would provide for relocation of the Main Post trailhead to the intersection of Arguello Boulevard and Moraga Avenue; and would improve wheelchair accessibility.

Variations Between Alternatives

In addition to the changes proposed above, Alternatives B and C would provide:

- An accessible connection to the south of the new trailhead at Inspiration Point.
- A new multi-use trail from the Main Post trailhead to Barnard Avenue, Hicks Road, and Quarry Road.
- Redevelopment of Quarry Road as a multi-use trail.

Alternative D would provide:

- An incompletely accessible connection.
- New pedestrian trails connecting to Arguello Boulevard behind the Officers' Club.
- Reconfiguration of Quarry Road as a pedestrian trail.

Bay Area Ridge Trail

A new 4 kilometer long (2.5 mile) segment of the Bay Area Ridge Trail was opened in 1999. The trail enters the Presidio from the south at the Arguello Gate, and accommodates both hikers and bicyclists. The trail connects with the Anza Trail at Washington Boulevard, and the California Coastal Trail near the Golden Gate Bridge. Along with the Golden Gate Promenade, the trail's sections near the Arguello Boulevard/Washington Boulevard intersection and through Rob Hill provide the Presidio's only official off-street multi-use trails.

The Presidio Golf Course provides trailhead parking for southern access to the trail. The Battery East parking area provides access from the Golden Gate Bridge area.

In its current configuration, the off-street multi-use trail near Arguello/Washington Boulevards is surfaced with recycled paving materials and varies between 2.4 meters and 3 meters in width (8 feet to 10 feet). The Rob Hill section is on a gravel-surfaced service road and is 3.3 meters to 7.5 meters wide (11 feet to 25 feet). At Fort Scott, the multi-use trail divides into a shared service roadway for bicycles, and a wide, interior sidewalk for pedestrians. Another pedestrian section of the Bay Area Ridge trail is located to the west of the coastal batteries.

The on-street portions of the Bay Area Ridge Trail are designated as City of San Francisco Bike Route #65. This bike route enters the Presidio at the Arguello Gate and converges with the Coastal Trail at Lincoln Boulevard and Merchant Road.

Proposed Improvements

All action alternatives would provide the following improvements where feasible given topography and other factors:

- Improvements to the Golf Course trailhead.
- A new multi-use trailhead on the north side of Washington Boulevard.
- Striped bike lanes on both sides of Arguello Boulevard and Washington Boulevard (SF Bike Route #95)
- A shared roadway on Kobbe Avenue and Greenough Avenue, and on the Ralston service road.

Variations Between Alternatives

In addition to the improvements listed above, Alternative B would provide:

- A new alternate pedestrian route through woods from Nauman Road near the cemetery to Rob Hill.
- A replacement for the Rob Hill alignment with a new multi-use trail south of Battery McKinnon-Stotsenberg and along Washington Boulevard.
- Improvements to the Rob Hill pedestrian trail, routing traffic around the campground.
- Retention of the existing alignment through Fort Scott.
- An improved Lincoln Boulevard crossing at Storey Avenue and connection to the Coastal Trail at Battery Boutelle.

- Consideration of weekend closures to visitors' automobiles on Washington Boulevard from Park Avenue to Battery Caulfield Road.

Alternative C would provide:

- A new multi-use alternate route from Nauman Road near the cemetery to Fort Scott.
- Improvements to the Rob Hill alignment as a multi-use trail to the south of Battery McKinnon-Stotsenburg and along Washington Boulevard.
- A new multi-use trail connecting to Greenough Avenue and Fort Scott and a multi-use loop trail in the interior of Fort Scott.
- A re-route of the trail to an improved Lincoln/Merchant intersection with a new multi-use trail connection to the Coastal Trail.

Alternative D would provide:

- A realigned pedestrian trail to the south side of Washington Boulevard and upgrades to the existing roadside path to meet accessibility standards.
- A new pedestrian trail south of Battery McKinnon-Stotsenberg.
- Reconfiguration of the existing multi-use trail from Compton Road to Hunter Road and Rob Hill as a pedestrian trail.

Juan Bautista de Anza National Historic Trail

The Anza trail was established in 1990 to commemorate the route followed by the Juan Bautista de Anza in 1775-76, when he led a contingent of 30 soldiers and their families to found a presidio and mission at San Francisco Bay. In 1999, it was named a National Millennium Trail. The national trail starts in Nogales, Arizona, and travels northwest to the Presidio of San Francisco, California.

Although a formal trailhead has not yet been constructed, the existing trail can be accessed from the Mountain Lake and Coastal Batteries parking areas and from the Golden Gate Bridge.

Approximately three miles of trail from Mountain Lake to Fort Point have been marked. From Mountain Lake to Wedemeyer Street, the trail is a 4.8 meter to 7.5 meter wide (16 feet to 25 feet) asphalt paved service roadway. In the Battery Caulfield Road corridor, the trail occurs on sidewalks or in the roadway. At Washington Boulevard, it converges with the Bay Area Ridge Trail.

The Juan Bautista de Anza Trail is designated as City of San Francisco Bike Route #69. The bike route enters the Presidio at the 14th Avenue Gate and travels along Battery Caulfield Road, converging with the Bay Area Ridge Trail at Washington Boulevard.

Proposed Improvements

All action alternatives would provide the following improvements where feasible given topography and other factors:

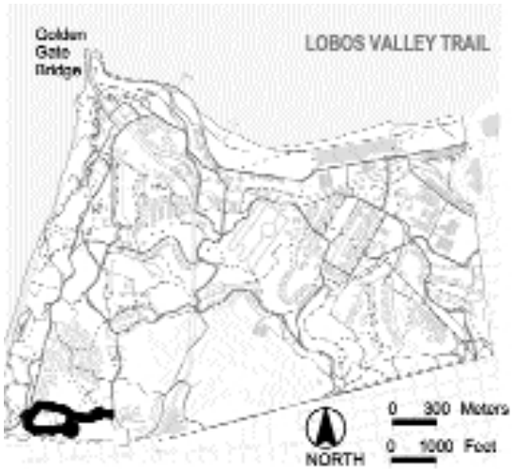
- A new trailhead with parking and an overlook constructed near the 15th Avenue Gate.
- Reconfiguration of the Mountain Lake/Public Health Service Hospital service roadway and parking lot as a multi-use trail.
- A connection to the Bay Area Ridge Trail at Washington Boulevard via a multi-use trail along Wedemeyer Street and Battery Caulfield Road.
- A shared roadway for bicycles along Battery Caulfield Road.

Variations Between Alternatives

In addition to the improvements listed above, Alternative D would provide:

- A new accessible pedestrian trail with an off-street alignment on upper Battery Caulfield Road.
- A new pedestrian trail along the west side of Washington Boulevard.

Lobos Creek Valley Trail Corridor



Containing one of the last free-flowing creeks in San Francisco, Lobos Creek Valley provides important native plant and wildlife habitat. It also provides a source of water for the Presidio. An 800 meter (0.5 mile) long boardwalk winds around a parking lot and Trust maintenance facilities. The existing boardwalk passes through a recently restored dune habitat planted with native species. A sandy social trail at a slightly higher elevation leads to the 15th Avenue Gate and the Anza Trail. The creek cannot be seen or accessed from the current alignment.

In its existing configuration, the trail consists of a 1.4 meter wide (54 inch) boardwalk, constructed of recycled plastic lumber. It travels through restored dunes and native plantings in an alignment near Lobos Creek, which is protected by a high fence. The upper portion of the trail is between 1.5 meters and 4.5 meters wide (5 feet to 15 feet) and sand based. Social trails to the west of Lincoln Boulevard provide links to south Baker Beach. The trailhead for the lower trail is located near the 25th Avenue Gate. Bicycles are not permitted on any portion of the Lobos Creek Valley Trail.

Proposed Improvements

All action alternatives would provide the following improvements where feasible given topography and other factors:

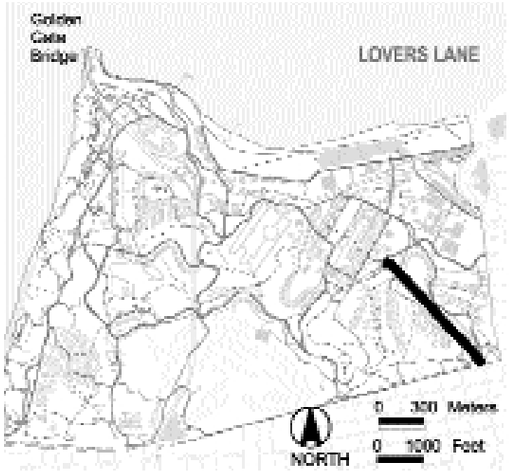
- A new trailhead at Baker Beach.
- Relocation of the trailhead at the intersection of Lincoln Boulevard and Bowley Street.
- A new creekside overlook on a gated spur for ranger-led tours.
- Realignment of the trail in steep areas to provide greater accessibility.
- Stabilization of the surface of the upper trail.
- A new east-west route from the Anza Trail to the Coastal Trail through the Wherry Housing area.

Variations Between Alternatives

In addition to the above improvements, Alternative D would provide:

- Improvements to the existing social trail from upper Lobos Creek Valley Trail to the new pedestrian alignment of the Anza Trail.

Lover's Lane



Lover's Lane is one of the oldest foot trails in the Presidio. The existing trail begins at Funston Avenue and Presidio Boulevard. It crosses a tiny brick footbridge over El Polin Creek. From there, it passes enlisted men's and officers' houses dating from the 1930s, and ends at the Presidio Boulevard Gate. Historically, the path continued three miles southwest to Mission Dolores, and connected the Spanish presidio to the mission.

In its current configuration, the trail consists of a shared roadway and sidewalk at Presidio Boulevard in the Main Post area, and a 1.2 meter to 1.8 meter wide (4 feet to 6 feet) pedestrian trail connecting to MacArthur Drive. A 1.2 meter to 2.4 meter wide (4 feet to 8 feet) paved pedestrian trail then leads to the Presidio Boulevard Gate.

Trailhead parking is provided near the intersection of West Pacific Avenue and Presidio Boulevard. The trail can also be accessed from the Main Post. Bicycles are not permitted on Lover's Lane. The trail is not accessible.

Proposed Improvements

All action alternatives would provide the following improvements where feasible given topography and other factors:

- A new pedestrian trailhead at the Main Post.
- A new trailhead for a multi-use segment at the junction of Presidio Promenade near Lincoln and Presidio Boulevards.
- A new pedestrian connection to the Main Post Visitor Center.
- Enhancements consistent with the historic character along the entire corridor.
- Bike lanes on both sides of Presidio Boulevard, except for an uphill bike lane along Presidio Boulevard between Simonds Loop and Pacific Avenue.

Variations between Alternatives

In addition to the improvements listed above, Alternative B would provide:

- A multi-use trail along MacArthur Avenue, Morton Street and Clarke Street.
- Reconfiguration of the existing social trail to the west of Presidio Boulevard as multi-use trail.
- A multi-use trail along MacArthur Avenue, Morton Street, and Clarke Street.

Alternative C would provide:

- A new multi-use trail to the east of Lover's Lane from MacArthur Avenue to Simonds Loop.

Alternative D would provide:

- No multi-use trails in the Lover's Lane corridor.
- Reconfiguration of the existing social trail to the west of Presidio Boulevard as a pedestrian trail.

Golden Gate Promenade

The existing Golden Gate Promenade provides access to the newly restored tidal marsh and beaches along Crissy Field. Trails are used both by pedestrians and bicyclists. The trails offer expansive views and access to water birds, native plants, and sandy beaches. The 6.4 kilometer (4 mile) long Golden Gate Promenade is part of the San Francisco Bay Trail – a planned recreational corridor that will provide a continuous 640 kilometer (400 mile) network of bicycling and hiking trails around San Francisco and San Pablo Bays. The Bay Trail will connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major toll bridges in the region. To date, approximately 336 kilometers (210 miles) of the alignment , or slightly more than half the Bay Trail's ultimate length, have been completed. The Bay Trail will provide a commute alternative for bicyclists, as well as connections to numerous public transportation facilities, including ferry terminals, light-rail lines, bus stops, Caltrain, Amtrak, and BART.

In its current configuration, the multi-use trail, which begins at the Marina Boulevard entrance to the Presidio, is 9 meters wide (30 feet) with 6 meters (20 feet) of paved trail and 3 meters (10 feet) of unpaved trail. From Fort Point Wharf to Fort Point both cyclists and pedestrians share Marina Drive with automobiles.

The City of San Francisco's Bike Route #2 parallels the Golden Gate Promenade while it travels along Old Mason Street, Crissy Field Avenue, Long Avenue, and Marine Drive to Fort Point.

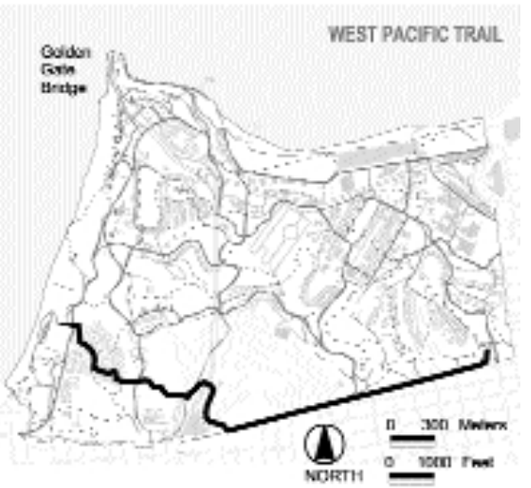
This corridor is the same for all action alternatives.

Proposed Improvments

All action alternatives would provide the following improvements where feasible, given topography and other factors:

- New trailheads at the Golden Gate Bridge Plaza and Fort Point.
- A marked pedestrian trail from Fort Point Wharf to Fort Point.
- A Class III shared road for cyclists along Marine drive (SF Bike Route #2).
- An uphill bike lane on Long Avenue.
- A two-way Class I bike lane along the west bluff parking lot near the Warming Hut.

West Pacific/Mountain Lake Corridor



West Pacific Avenue and Mountain Lake are located at the southern edge of the Presidio. In 1776, Mountain Lake was the original campsite of the Anza settlement party. It later became a source of fresh water for San Francisco. Much of the

lake's shoreline was buried in the 1930s to provide a freeway approach to the Golden Gate Bridge. An existing multi-use trail and bikeway along the western portion of West Pacific Avenue provides access to Mountain Lake from the Arguello Gate. An off-street pedestrian trail along the eastern portion of West Pacific Avenue currently provides a link from the Arguello Gate to the Presidio Boulevard Gate as it passes by Julius Kahn Playground, Lover's Lane, and portions of the Presidio Forest.

In its current configuration, the trail consists of a 1.5 meter to 4.5 meter wide (5 feet to 15 feet) trail along West Pacific Avenue from Presidio Boulevard to Arguello Boulevard. The unmarked trail passes through the Presidio Golf Course parking lot and along a service road to Mountain Lake and the former Public Health Service Hospital. The upper Lobos Creek Valley Trail and adjacent social trails provide connecting links to the Anza Trail, Baker Beach Housing, and the California Coastal Trail.

Bicycles currently share the roadway with cars along West Pacific Avenue from the Presidio Boulevard Gate to 5th Avenue. Both bicyclists and pedestrians share the service road to Mountain Lake.

Proposed Improvements

All action alternatives would provide the following improvments where feasible, given topography and other factors:

- Reconfiguration of the existing pedestrian trail to a multi-use trail along West Pacific Boulevard from Presidio Boulevard to Arguello Boulevard.
- Reconfiguration of the Presidio Golf Course parking lot to provide a continuous multi-use trail from Arguello Boulevard to Mountain Lake.
- A new multi-use trail from Lobos Creek Trailhead to the Baker Beach picnic area.
- Class III shared bikeway and traffic calming measures on West Pacific Boulevard.

Variations Between Alternatives

In addition to the improvements described above, Alternative B would provide:

- A new pedestrian trail between the Ecology Trail and Lovers Lane. The segment from the Ecology Trail to Paul Goode Field would be new construction, while the segment from Paul Goode Field to Lovers Lane would reconfigure the existing service road and social trail.

Alternative C would provide:

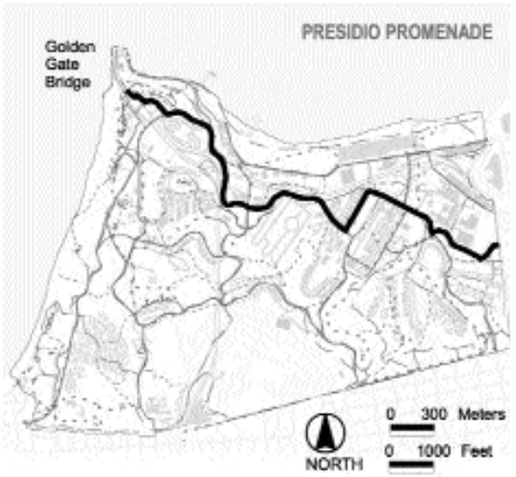
- A new multi-use trail between the Ecology Trail and Lovers Lane. The segment from the Ecology Trail to Paul Goode Field would be new construction, while the segment from Paul Good Field to Lovers Lane would reconfigure the existing service road and the social trail.
- Upgrades to the social trail on the north side of the Public Health Service Hospital to a multi-use trail with connections to the Anza Trail.
- A new multi-use trail from the Anza Trail to Lincoln Boulevard and a new multi-use trail connecting to the Upper Lobos Creek Valley trail.

Alternative D would provide:

- Improvements to the existing pedestrian trail along West Pacific Boulevard from Presidio Boulevard to Arguello Boulevard.
- An additional pedestrian trail connection with the upper portion of the Lobos Creek Valley Trail and with the Anza Trail on upper Battery Caulfield Road.

NEW TRAIL CORRIDORS

Presidio Promenade



The new Presidio Promenade corridor would follow Lincoln Boulevard, which links many of the cultural and historic resources of the Presidio, including the Golden Gate Bridge at the northwest reaches of the park, Fort Scott, the Cavalry Stables, the San Francisco National Cemetery, the Main Post, and the Visitor Center. Presidio Boulevard, Letterman Avenue, and Lombard Street would also be included in the corridor, and would connect the Main Post to the historic Lombard Gate and the Letterman Complex at the park's eastern edge. With such rich historical resources, the new Presidio Promenade would become a primary route for visitors, residents, and tenants. It would provide a continuous multi-use trail and bikeway from the Golden Gate Bridge to the new Greenwich Street Gate, designed to accommodate pedestrians and bicycles only. Visitors arriving by foot, bicycle, public transportation, or automobile from either the north or the east would have easy access to most other major Presidio trail corridors.

Trailheads would be provided at Golden Gate Bridge Plaza, the Visitor Center at the Main Post, and inside the Lombard Avenue and Greenwich Street Gates.

Proposed Improvments

All action alternatives would provide:

- New trailheads at Golden Gate Bridge Plaza, Battery East, the Main Post Visitor Center, and inside the Lombard and Greenwich Gates.
- A multi-use “shortcut” south of the stables that connects to Lincoln Boulevard, with the Patten Road segment reconfigured as a multi-use trail.
- A new pedestrian trail on Lincoln Boulevard west of McDowell Street.
- A connection from the trailhead at Greenwich Gate with a multi-use trail along Lincoln Boulevard and Letterman Drive.

Variations Between Alternatives

In addition to the improvements listed above, Alternatives B and C would provide:

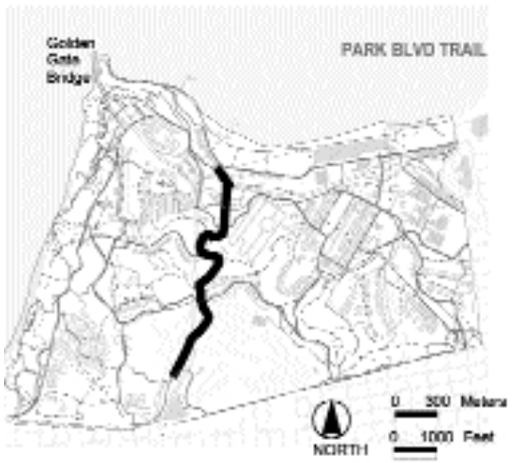
- A new multi-use trail from Fort Point overlook to the Golden Gate Bridge Visitor Center along the existing maintenance road.
- A multi-use trail on Battery East Road from the Golden Gate Bridge Visitor Center to Battery East, continuing on the north side of Lincoln Boulevard.
- A new multi-use trail on the northeast side of Montgomery Street connecting to the Main Post and the Visitors Center.

Alternative D would provide:

- A connection from Fort Point overlook to the Golden Gate Bridge Plaza with a new pedestrian trail along the existing road.
- An alternative pedestrian route between Battery East and the Long/Lincoln intersection on Andrews Road.

- A new pedestrian trail along Sheridan Avenue to connect with the Main Post and the NPS Visitor Center.
- A connection from the NPS Visitor Center to Lincoln Boulevard with pedestrian trails as part of the Main Post rehabilitation.

Park Boulevard Trail



The new Park Boulevard corridor would follow Park Boulevard, which is a major north-south connector. The corridor travels through significant portions of the Historic Forest – a mature forest of pine, cypress, and eucalyptus, planted by the army from the 1880s through the 1940s. The new multi-use trail would connect Mountain Lake with Presidio and Golden Gate Promenades.

Proposed Improvements

All action alternatives would provide:

- Improvements to the existing Mountain Lake trailhead.
- Bike lanes on both sides of Park Boulevard between Washington and Lincoln Boulevards.
- Bike lanes on both sides of McDowell Avenue.

Variations Between Alternatives

In addition to the above improvements, Alternatives B and C would provide:

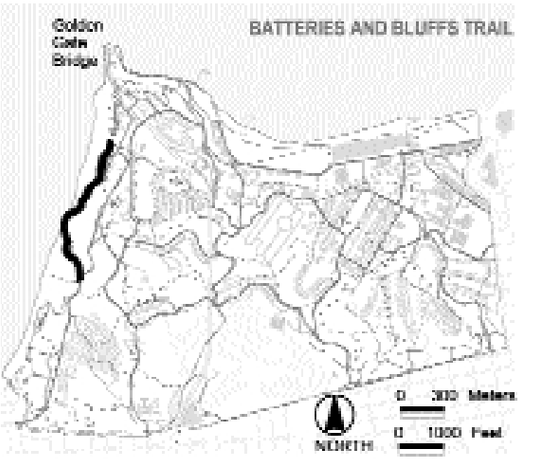
- A new multi-use trail from Crissy Field to Mountain Lake.

Alternative D would provide:

- A new pedestrian trail from Crissy Field to Washington Boulevard, connecting to the multi-use trail at Mountain Lake.

Batteries and Bluffs Corridor

The new Batteries and Bluffs Corridor would provide a pedestrian trail from Battery Boutelle to Baker Beach and Battery Crosby, replacing the many social trails that now contribute to the degradation of the area.



Proposed Improvements

All action alternatives would provide:

- A new trailhead with parking provided at Battery Godfrey.
- A new pedestrian trail upgraded from the social trail from North Baker Beach to Battery Godfrey trailhead.

Variations Between Alternatives

In addition to the above improvements, Alternative B would provide:

- A new challenging pedestrian trail from Battery Crosby to North Baker Beach.

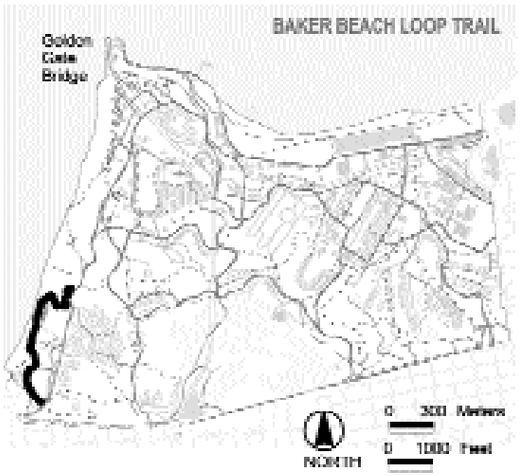
Alternative C would provide:

- No pedestrian trail from Battery Crosby to North Baker Beach.

Alternative D would provide:

- No pedestrian trail from Battery Crosby to North Baker Beach.
- A new pedestrian trail on Battery Crosby service road.
- A new pedestrian trail from Battery Marcus Miller to north Baker Beach.

Baker Beach Corridor



The new Baker Beach corridor would access south Baker Beach, which lies at the foot of rugged serpentine cliffs south of the Golden Gate. The 1.6 kilometer (1 mile) beach provides views of the Golden Gate Bridge, Marin Headlands, and Land's End. A multi-use trail would provide an accessible route from the California Coastal Trail and the 25th Avenue Gate for visitors who wish to sightsee, fish, beachcomb, picnic, or visit a coastal battery. Pedestrian trail connections to the Lobos Creek Valley Trails would also be available on this corridor. A trailhead would be provided at the Baker Beach picnic area.

Proposed Improvements

All action alternatives would provide:

- A new trailhead at the south Baker Beach picnic area to serve multiple trails via Baker Beach.
- A new multi-use trail to connect Lobos Creek trailhead to Baker Beach and the Coastal Trail just north of Pershing Drive.
- A beach access route from the beach parking lot to the high tide line.
- A new accessible pedestrian loop trail encircling the picnic area.

Variations Between Alternatives

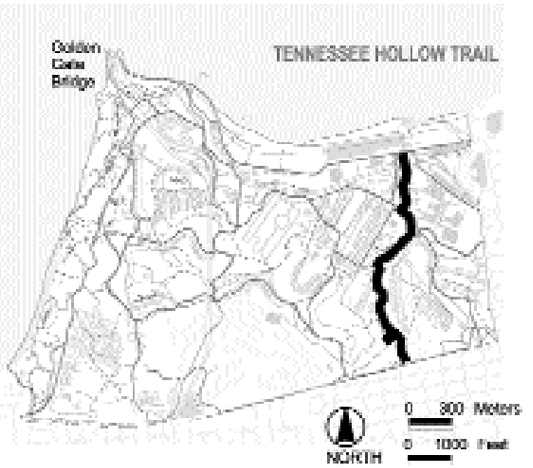
In addition to the above improvements, Alternatives B and C would provide:

- A new multi-use trail on the west side to the parking area and Battery Chamberlin.

Alternative D would provide:

- A new pedestrian trail on the west side of the parking area and Battery Chamberlin.

Tennessee Hollow Corridor



The new Tennessee Hollow Corridor would connect recreational areas at the south side of the Presidio, (e.g. Julius Kahn Playground) through the Tennessee Hollow watershed to Crissy Marsh. El Polin Spring, the source of fresh water for the Spanish Presidio, lies at the head of Tennessee Hollow. In 1898, the First Tennessee Volunteer Infantry Regiment camped there, and today visitors often picnic in this place of quiet retreat. The NPS and Trust have plans to restore this

historic watershed from El Polin Spring to the restored tidal marsh at Crissy Field. A new trail would follow one of the three tributaries to the point where they converge above the Lovers Lane footbridge, and from there to the marsh at Crissy Field. Trailheads would be provided at Julius Kahn playground, Lincoln Boulevard/Girard Road, and Mason Street.

Proposed Improvements

All action alternatives would provide:

- Trailheads at Julius Kahn Playground, Lincoln Boulevard near Funston Avenue, Halleck Street at Mason Street, and Crissy Field Beach.
- A new trail corridor developed in coordination with Tennessee Hollow restoration plans.
- A connection to the Golden Gate Promenade and Crissy Field Beach trailhead via the existing pedestrian trail.
- Spur trails with overlooks to view wetland and riparian environments.
- Upgrades to Halleck Street to include bike lanes on both sides of the street, if feasible.

Variations Between Alternatives

In addition to the above improvements, Alternative B would provide:

- A new pedestrian trail east of Halleck Street from Lincoln Boulevard to the Mason Street bikeway and path.

Alternatives B and C would provide:

- A new pedestrian trail from Julius Kahn playground to Presidio Boulevard, connecting via a multi-use trail to Funston Trailhead at Lincoln Boulevard

Alternative C would provide:

- A new multi-use trail east of Halleck Street from Lincoln Boulevard to the Mason Street bikeway and path.

Overall Trail Network

In addition to improving and increasing corridors within the Presidio, each action alternative would improve overall connectivity by providing an integrated trail network. In the descriptions and illustrations which follow, this network is described in detail. Quantification of the difference between the alternatives is provided in Table 4.1.

Alternative A: No Action

The No Action Alternative would maintain the Presidio's current trails and bikeways network over the next 20 years. This alternative would not construct any new trails or bikeways, but would include continued maintenance. The alternative is illustrated in Figure 4-1A. Figure 4-1B illustrates the existing road-based bicycle routes in the Presidio.

Under this alternative:

- No comprehensive changes or major new trail building activities would take place.
- No new multi-use trails or off-street bicycling opportunities would be provided.
- Park facilities and operations would continue using current procedures.

	Alternative A		Alternative B		Alternative C		Alternative D	
Trail Type	km	miles	km	miles	km	miles	km	miles
Pedestrian Trails	16.5	10.2	31.0	19.2	16.9	10.5	44.5	27.6
Multi-use Trails	9.8	6.1	32.4	20.1	42.1	26.1	17.6	10.9
Bikeways (Class II bike lanes)	3.7	2.3	23.2	14.4	23.2	14.4	20.8	12.9
Social Trails (not included in total)	(15.9)	(9.9)	0	0	0	0	0	0
Total Designated Trails:	30.0	18.6	86.6	53.7	82.3	51.0	82.9	51.4
Trails Modification								
New Trails	n/a	n/a	27.8	17.4	20.3	12.7	24.8	15.5
Pedestrian Trails Converted to Multi-use Trails	n/a	n/a	4.0	2.5	57.7	4.8	3.4	2.1
Multi-use Trails Converted to Pedestrian Trails	n/a	n/a	0	0	0	0	0.5	0.3
Social Trails Converted to Pedestrian Trails	n/a	n/a	3.6	2.3	2.1	1.3	2.0	1.2
Social Trails Converted to Multi-use Trails	n/a	n/a	1.0	0.6	4.4	2.7	0.5	0.3
Service Roads Converted to Multi-use Trails	n/a	n/a	0.8	0.5	0.9	0.5	0.9	0.5
Total Newly Designated Trails:	n/a	n/a	40.6	25.21	36.3	22.5	39.4	24.4

Note: *All Action Alternatives will close most social trails and/or convert them to pedestrian or multi-use trails.*

Table 4-1. *Trails and Bikeways by Alternative*

ALTERNATIVES

- Limited closure of certain social trails might occur as part of ongoing maintenance operations to implement the Presidio VMP.

Alternative A's overall concept is to maintain the status quo and to preserve the basic framework of existing vehicular, pedestrian, and bicycle use. In emphasizing the traditional uses of the Presidio, Alternative A would maintain the 16.3 kilometers (10.2 miles) of existing pedestrian trails, 9.8 kilometers (6.1 miles) of multi-use trails, and 3.7 kilometers (2.3 miles) of bikeways. A minimum of 15.8 kilometers (9.9 miles) of significant social trails would remain substantially unchanged, but would be subject to incremental closures over time as directed by the Presidio VMP.

Alternative B: Mixed Use

This alternative features the widest range of trail types and connections, and would provide a mix of urban and natural visitor experiences to emphasize both traditional uses of the Presidio, and the Presidio's unique location in a large metropolitan area. The alternative is illustrated in Figure 4-2A. Road-based bicycle routes provided in both Alternatives B and C are shown in Figure 4-2B.

Under this alternative:

- Many opportunities would be provided for safe and enjoyable trails and bikeways experiences for the widest variety of park users.
- New pedestrian and multi-use trails would provide access for people with disabilities to many Presidio destinations.
- Off-street bicycling routes on many multi-use trails would be provided for family and recreational bicyclists.
- Social trails which may be hazardous or threaten resources would be closed, consistent with the VMP. The social trails would be replaced with more sustainable trails providing access to the same park destinations

Under Alternative B:

Alternative B would provide:

- 86 kilometers (53.7 miles) of total designated trails.
- 30.7 kilometers, or 19.2 miles of primary and secondary pedestrian trails.
- 32.2 kilometers, or 20.1 miles of multi-use trails.
- 2.3 kilometers, or 14.4 miles of bikeways
- A minimum of 8 kilometers (5 miles) of social trails would be closed and 7.7 kilometers (4.8 miles) would be improved and designated as official trails

Alternative C: Shared Use

This alternative provides the greatest number of multi-use trails that access major points of interest in the Presidio. The alternative emphasizes wider, multi-use trails designed to accommodate large numbers of users. The alternative would provide the fewest number of opportunities for dispersed visitor experiences, such as enjoying quiet solitude. The alternative is illustrated in Figure 4-3. Road-based bicycle routes provided in both Alternatives B and C are shown in Figure 4-2B.

Under this alternative:

- The largest number of off-street bicycling opportunities would be provided for family and recreational bicyclists on shared multi-use paths.
- The fewest pedestrian-only trails would be provided.

Alternative C would provide:

- 81.6 kilometers (51 miles) of total trails.
- 16.8 kilometers, or 10.5 miles of pedestrian trails.

A minimum of 8.6 kilometers (5.4 miles) of social trails would be closed and 7.2 kilometers (4.5 miles) would be improved and designated.

Alternative D: Dispersed/Single Use

The dispersed alternative emphasizes separation of pedestrians and bicycles. It offers significant opportunities for pedestrians to experience natural and cultural resources in an atmosphere of quiet solitude. It would provide limited accessible trails and the least amount of off-street recreational bicycle opportunities. The alternative is illustrated in Figure 4-4A. Figure 4-4B shows road-based bicycle routes provided in this alternative.

Under this alternative:

- The most pedestrian trails would be developed to provide the greatest degree of physical challenge for pedestrians, the greatest variety of pedestrian experiences, and the greatest opportunity for pedestrian travel throughout the Presidio.
- Many opportunities would be provided for safe and enjoyable trails and bikeways along such major corridors as the Coastal Trail and the Presidio Promenade.
- A limited number of multi-use trails would be provided (about half the number of miles of multi-use trails as compared to other action alternatives).

Alternative B would provide:

- 42 kilometers, or 26.8 miles of multi-use trails.
- 23 kilometers, or 14.4 miles of bikeways.

The alternative's key concept is to provide an individual experience of the Presidio and to permit more opportunities for solitude. It emphasizes narrower pedestrian linkages and connections. Alternative D would preserve the Presidio's established trail corridors.

In general, trail connections would not be as consistent and continuous as the other action alternatives, such as along the Juan Bautista de Anza National Historic Trail and the Bay Area Ridge Trail corridors.

Alternative D would provide:

- 82 kilometers (54 miles) of total trails.
- 44.2 kilometers (27.6 miles) of pedestrian trails.
- 17.5 kilometers (10.9 miles) of multi-use trails.
- 19.5 kilometers (12.2 miles) of marked bike lanes (Class II).
- A minimum of 8 kilometers (4.8 miles) of social trails would be closed and 8 kilometers (4.8 miles) would be improved as designated trails.

Figure 4-1A. *Alternative A: No Action*

Back of 4-1A

Figure 4.1B

3 5 6 7

Back of 4.1B

Figure 4-2A. *Alternative B: Mixed Use*

Back of 4.2A

Figure 4-2B. *Alternatives B and C: On-road Bicycle Paths*

3 5 6 7

Back of 4.2B

Figure 4-3. *Alternative C: Shared Use*

Back of 4.3

Figure 4-4 A. *Alternative D:* Dispersed/Single Use

3 5 6 7

Back of 4.4A

Figure 4-4B. *Alternative D: On-road Bicycle Routes*

3 5 6 7

COMPARISONS AT KEY LOCATIONS

To help visualize changes, illustrations comparing proposed development to existing conditions at key locations are shown here. The selected locations are not comprehensive, but are representative of proposed trails and bikeways development.

California Coastal Trail: Lincoln Boulevard at Pershing Drive

The trail corridor section occurs just north of the Pershing Drive North intersection on Lincoln Boulevard. Figure 4-5 illustrates existing conditions. Figure 4-6 illustrates the proposed development for Alternatives B and C. The total width of the existing developed area, from the social trail's outside edge just west of the barrier rail to the drainage swale edge on the east, is approximately 15 meters (49 feet). By re-striping the traffic lanes to a width of 3.3 meters (11 feet), a multi-use trail and bike lanes in both directions can be accommodated within the current developed width. Detailed evaluation should be conducted during design to determine whether greater separation between the trail and roadway could be provided, or if a barrier rail is required.

Alternative D, Dispersed/Single Use Alternative, would provide a pedestrian trail instead of a multi-use trail at this location.

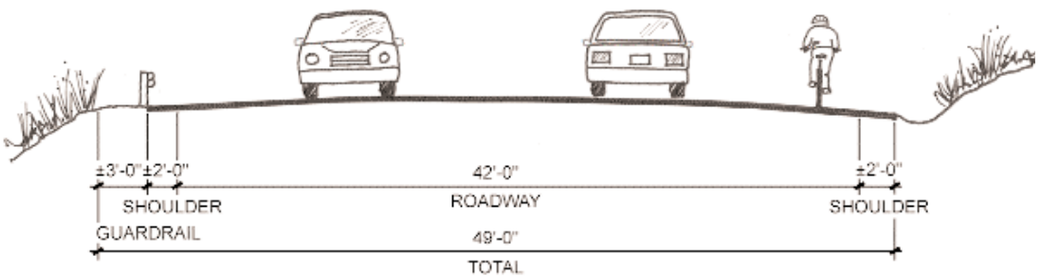


Figure 4-5. *Existing Conditions at Lincoln Boulevard at Pershing Drive North*

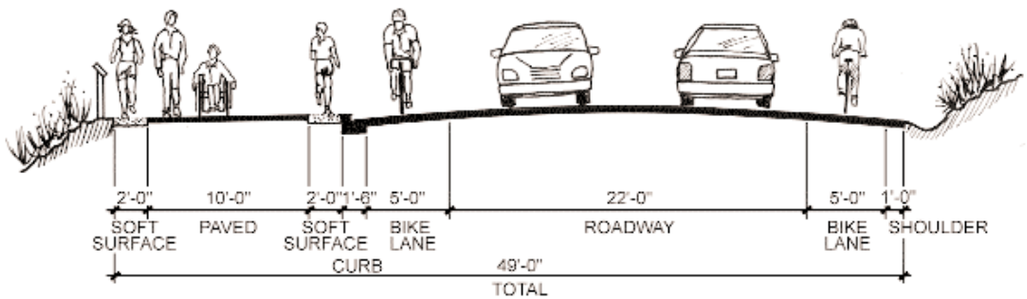


Figure 4-6. *Proposed Development at Lincoln Boulevard at Pershing Drive North*

Coastal Trail: Lincoln Boulevard at Kobbe Avenue

The developed width of Lincoln Boulevard where Kobbe Avenue intersects is approximately 17.6 meters (58.5 ft.) between the existing restoration area protection fence on the west and the drainage swale edge on the east (Figure 4-7). By re-striping the roadway consistent with Presidio traffic calming measures, bike lanes, 3.3 meter (11-foot) vehicle lanes, and a standard multi-use trail can be accommodated in all Action Alternatives (Figure 4-8). A buffer planting would be provided between the trail and road. The buffer planting would help reduce the barrier rail's visual impact. The planting would vary slightly in width, depending on location constraints.

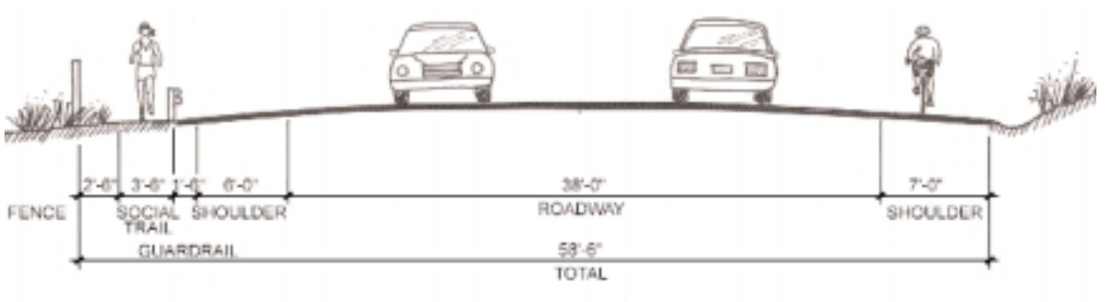


Figure 4-7. *Existing Conditions at Lincoln Boulevard at Kobbe Avenue*

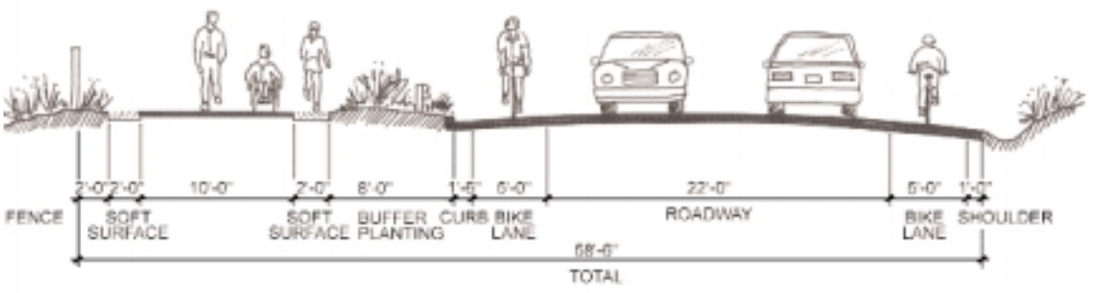


Figure 4-8. *Proposed Development at Lincoln Boulevard at Kobbe Avenue*

Coastal Trail: Lincoln Boulevard at Washington Boulevard

The existing corridor just south of where Washington Boulevard intersects Lincoln Boulevard is very narrow, totaling only 9.6 meters (32 feet) (Figure 4-9). It is constrained by trees and slopes on the west and a short steep slope and the Washington roadbed on the east. This condition exists for a distance of 30 to 60 meters (100 to 200 feet). A standard multi-use trail cannot be constructed without reconfiguring Washington Boulevard and excavating into the hillside, providing a trail structure on the west, or some combination of these. In this section of the corridor, all action alternatives would widen the roadway on the east to maintain safe bike lanes in each direction, but this constricts the Coastal Trail to only a narrow pedestrian trail (Figure 4-10). On the trail, bicyclists would be required to dismount and walk their bikes in order to protect pedestrians on this multi-use trail section.

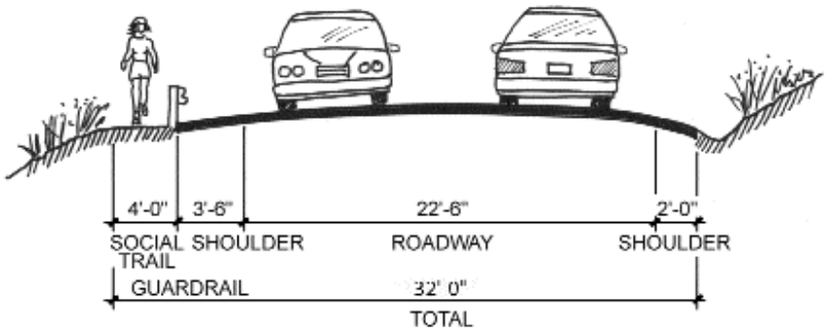


Figure 4-9. *Existing Lincoln Boulevard at Washington Boulevard*

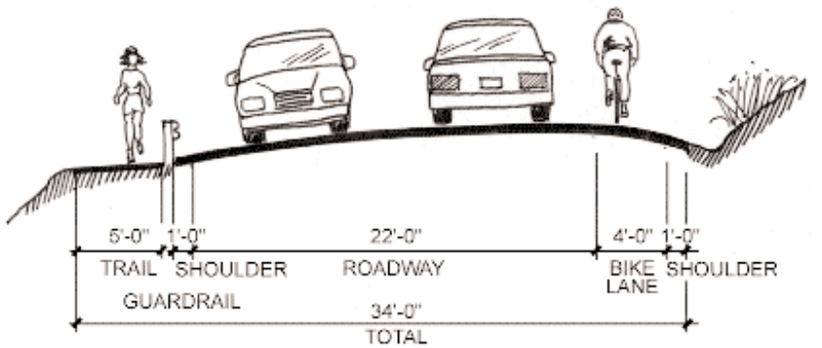


Figure 4-10. *Proposed Lincoln Boulevard at Washington Boulevard*

Presidio Promenade: Lincoln Boulevard at Crissy Field Avenue

The roadway on Lincoln Boulevard just north of the Crissy Field Avenue intersection is wider than necessary for two lanes of traffic, currently leaving room for only a narrow social trail on the east side (Figure 4-11). By re-striping the roadway consistent with Presidio traffic calming measures, bike lanes and a minimum standard multi-use trail would be accommodated in all Action Alternatives (Figure 4-12). During design, opportunities for greater separation between the roadway and trail should be investigated.

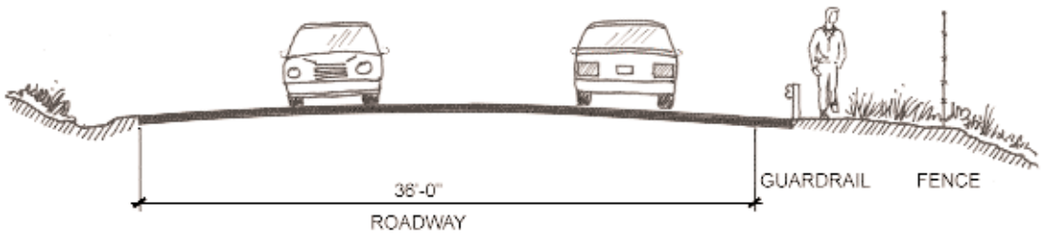


Figure 4-11. *Existing Conditions at Lincoln Boulevard at Crissy Field Avenue*

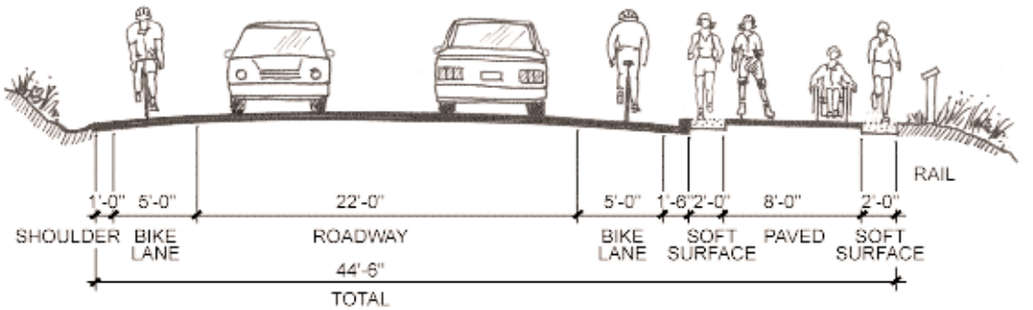


Figure 4-12. *Proposed Development at Lincoln Boulevard at Crissy Field Avenue*

Golden Gate Promenade at Fort Point Extension

Extension of the Golden Gate Promenade from the Torpedo Wharf Mine Depot to Fort Point along Marine Drive is constrained between the breakwater and the foot of steep slopes (Figure 4-13). Bicyclists would continue to share the roadway in this section. Vehicular traffic is generally slow and the number of cars is limited. To increase pedestrian safety, a designated pedestrian trail is proposed in all Action Alternatives, delineated by a new waterfront rail and surfacing to match the rest of the promenade (Figure 4-14).

Figure 4-13. *Existing Conditions at Golden Gate Promenade at Fort Point Extension*

Figure 4-14. *Proposed Development at Golden Gate Promenade at Fort Point Extension*

Ecology Trail Corridor at Arguello Boulevard

Arguello Boulevard is a narrow steep road, popular with cyclists and runners for its direct connection from the Main Post area to the Arguello Gate (Figure 4-15). A portion of the route is immediately adjacent to housing on a steep upslope, and separated from the street by a historic retaining wall. An uphill bike lane is proposed in all Action Alternatives with a minimum standard multi-use trail on the east side (Figure 4-16).

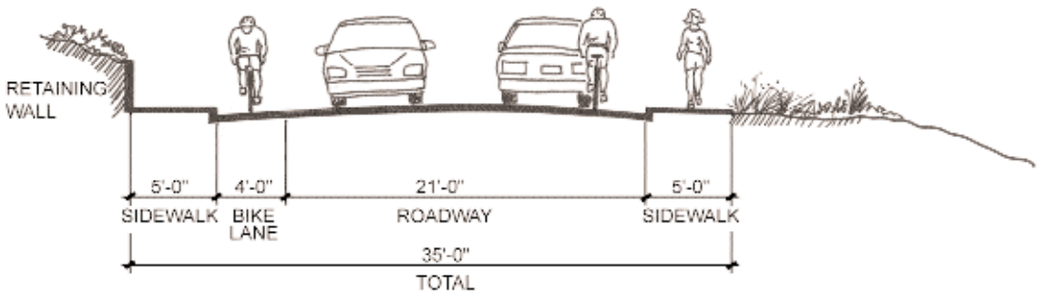


Figure 4-15. *Existing Conditions at Ecology Trail Corridor at Arguello Boulevard*

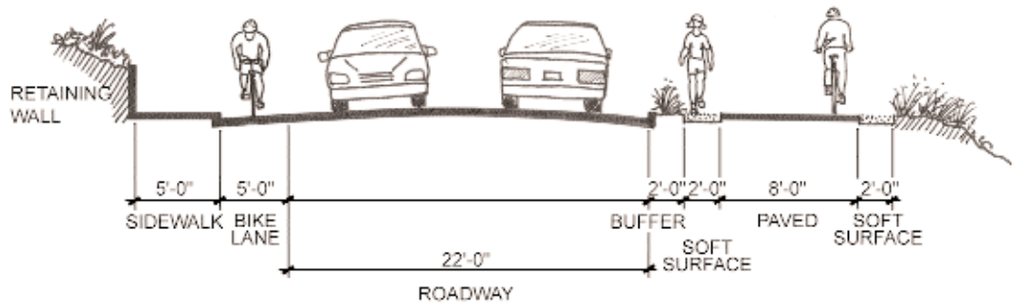


Figure 4-16. *Proposed Development at Ecology Trail Corridor at Arguello Boulevard*

Bay Area Ridge Trail at Washington Boulevard

Existing conditions are illustrated in Figure 4-17. On this stretch of Washington Boulevard, Alternatives B and C replace the existing perpendicular parking with parallel parking (Figure 4-18). A multi-use trail is located on the north side. Alternative D, Dispersed/Single Use, would maintain existing conditions.

Figure 4-17. *Existing Condition of Bay Area Ridge Trail Corridor at Washington Boulevard*

Figure 4-18. *Proposed Development of Bay Area Ridge Trail at Washington Boulevard*

Juan Bautista de Anza Trail at Battery Caulfield Road

This section of the Anza Trail, just northwest of the former Public Health Service Hospital, exceeds a five percent grade and is constrained by a Lessingia restoration area immediately west of the road (Figure 4-19). To provide an accessible trail, all action alternatives B and C propose moving the roadway to the east, and widening and re-grading 48- to 90-meters (160 to 300 feet) of the roadway to provide a multi-use trail on the west side (Figure 4-20). Since Battery Caulfield Road would remain a low-volume street for cars, bicycles would share the road.

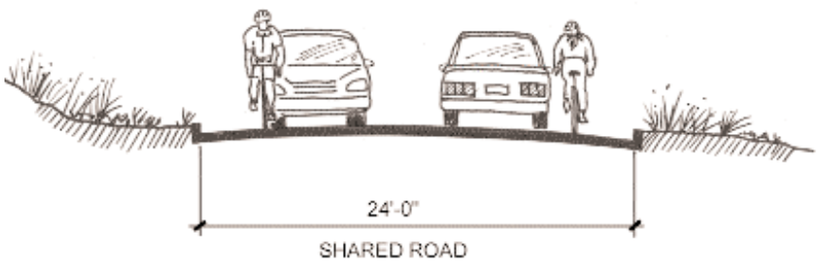


Figure 4-19. *Existing Condition of Juan Bautista de Anza Trail at Battery Caulfield Road*

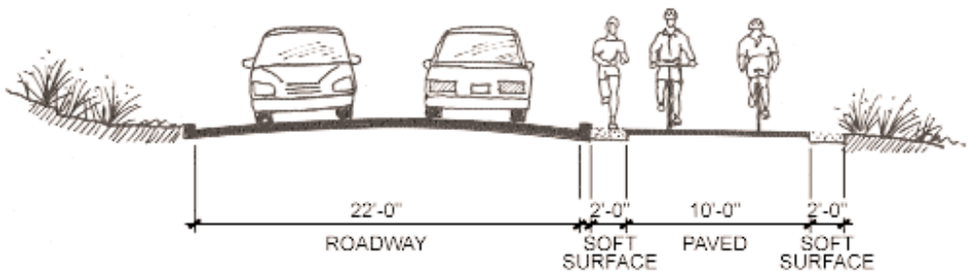


Figure 4-20. *Proposed Development of Juan Bautista de Anza Trail at Battery Caulfield Road*

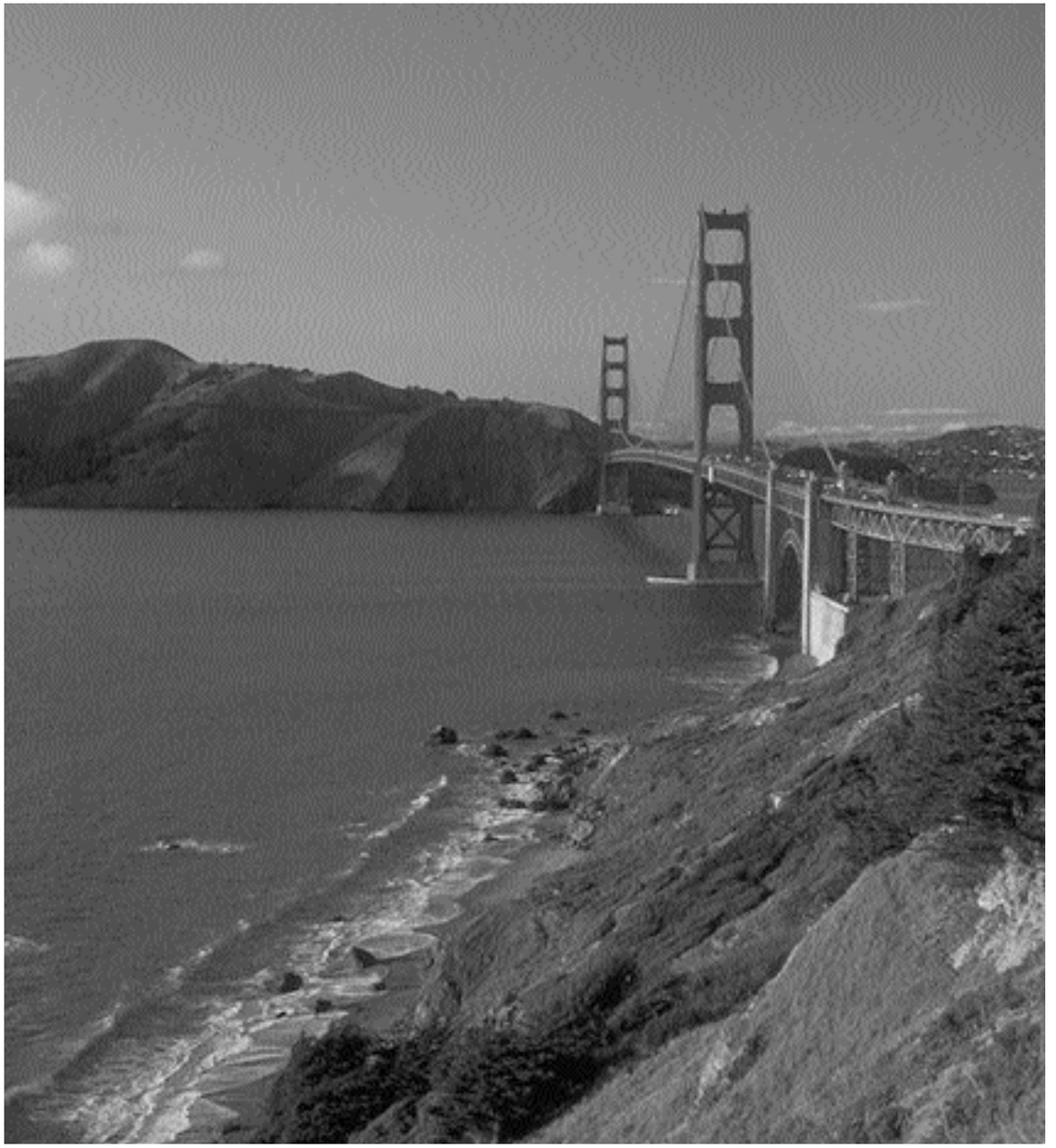
Environmentally Preferable Alternative

NPS procedures require that the environmentally preferable alternative be identified from the range of alternatives considered in the EA. The environmentally preferable alternative is the alternative that best promotes the NEPA's goals. The Presidio Trust and GGNRA are proposing reasonable alternatives to enhance visitor use and experience, support resource management, contribute to a comprehensive transportation strategy, encourage sustainable design and construction, and promote stewardship. The evaluation of the alternatives in Chapter 5 suggests that the Mixed Use Alternative (the NPS' and the Trust's preferred alternative) is the environmentally preferable alternative because it best enhances visitor use and experience by providing diverse recreational and educational experiences, minimizing user conflicts, improving connections to regional trails, and ensuring access to the Presidio's outstanding natural and cultural resources. This alternative also provides the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable or unintended consequences.

The other alternatives were not identified as environmentally preferable for the following reasons:

- The Shared Use Alternative would actively promote bicycles as a transportation alternative, providing family, visitor and commuter access to major destinations, and therefore best contributes to a comprehensive transportation strategy. However, this alternative would also require the most significant modifications to open land by adding the most linear miles of multi-use trails; this would add the greatest increase in hardened surface on currently undeveloped land.
- The Dispersed/Single Use Alternative would provide the greatest variety of experience and physical challenge for pedestrians. However, this alternative would not provide for consistent and continuous trail connections and therefore would not encourage a reduction in automobile use to and from, and within, the Presidio.
- The No Action Alternative would avoid construction effects, but would not attain the widest range of beneficial uses identified in Chapter 5 and would not enhance visitor use and experience.

ALTERNATIVES



6 Consultation and References

Interagency Review

U.S. Fish and Wildlife Service. On November 25, 2001, the Trust and the NPS requested formal consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to section 7 of the Endangered Species Act of 1973, as amended, concerning the Presidio Trails and Bikeways Master Plan (Presidio Trust and NPS 2001B). Prior to initiation of formal consultation, NPS and Trust representatives met and toured the Presidio with the USFWS on November 6, 2000 to discuss and orient the parties to the project. The Trust and NPS again met with USFWS staff on May 17, 2002 to discuss effects and descriptions of the projects. In the time between the initial meeting and request for formal consultation, the Trust and NPS corresponded verbally and in writing with the USFWS to review and discuss the project and consultation requirements. On July 23, 2002, the USFWS issued its Final Biological Opinion on the effects of the action on the endangered Raven's manzanita, San Francisco lessingia, Presidio clarkia, and the threatened Marin dwarf flax (USFWS 2002). After reviewing the current status of these plants, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, the Final Biological Opinion concluded that the Presidio Trails and Bikeways Master Plan, as proposed, is not likely to jeopardize the continued existence of these species, or adversely affect critical habitat of these species, as none has been designated. The biological opinion also notes that, "in addition to habitat restoration, the Trails Plan will benefit native plant communities, including federally listed plants, and wildlife by managing human access and redirecting access away from sensitive habitat areas."

San Francisco Bay Conservation and Development Commission. As the coastal management agency for the San Francisco Bay, the San Francisco Bay Conservation and Development Commission (BCDC) is responsible for ensuring that activities occuring within the coastal zone are consistent with the coastal zone management program for San Francisco Bay. The Bay Plan establishes policies to guide development in and around San Francisco Bay. The Bay Plan designates the Presidio as a waterfront park priority use area and states that the shoreline and the undeveloped areas in the Presidio should be retained as a regional park. Under the Coastal Zone Management Act, federal agencies are generally required to carry out their activities and programs in a manner consistent with the coastal management program. To implement this provision, federal agencies make consistency determinations on their proposed activities, such as the Presidio Trails and Bikeways Master Plan.

NPS and Trust staff met and toured the Presidio with BCDC staff during project scoping to identify issues of concern. In correspondence with the Trust, the BCDC noted the importance of the adequacy of the public access provided through the Presidio from both surrounding neighborhoods, and from areas within the Presidio to the San Francisco Bay (BCDC 2001). The BCDC also acknowledged the extensive public access directly along the shoreline in Area A, and reinforced the importance of providing trail connections to the bay and its shoreline through and from Area B to Area A (BCDC 2002). As part of the submittal for the consistency determination for the Presidio Trust Management Plan, the BCDC reviewed the conceptual connections and locations for both pedestrian and bicycle trails in the Presidio that have been further refined and incorporated into the Presidio Trails and Bikeways Master Plan. The BCDC staff expressed an interest in reviewing the Presidio Trails and Bikeways

Master Plan to determine: 1) the adequacy of proposed path widths and surfaces adjacent to sensitive resources and the appropriateness of the amenities proposed along these corridors, and 2) whether the proposed trails and bikeways system would provide a safe and enjoyable experience for users. On August 1, 2002, the BCDC found that the PTMP is consistent to the maximum extent practicable with the Bay Plan's policies on public access, and the Trust agreed to submit a separate consistency determination for the Presidio Trails and Bikeways Master Plan.

Advisory Council on Historic Preservation/ California State Historic Preservation Officer. Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), requires the NPS and the Trust agencies to take into account the effect of their undertakings on historic and cultural resources, including the National Historic Landmark District. The NPS and the Trust each entered into programmatic agreements (PA) with the Advisory Council on Historic Preservation (ACHP) and the California State Historic Preservation Officer (SHPO) that apply to all undertakings under their jurisdictions. The PAs provide a framework for reviewing the project effects internally and for consulting with other parties under certain circumstances. NPS and Trust staff have reviewed the draft Presidio Trails and Bikeways Master Plan and have concluded that the proposed undertaking will not have an adverse effect on historic properties, and will submit the draft Presidio Trails and Bikeways Master Plan to the ACHP and SHPO with a request for concurrence. This information will be supplemented at a later date by written comments on the draft plan received by the public, and the record of commentary during the public review period. Prior to preparation of a Finding of No Significant Impact, the NPS and the Trust will consult with the SHPO and ACHP to seek consensus regarding the effects of the Presidio Trails and Bikeways Master Plan. If there is a lack of consensus, consultation to address unresolved issues will be initiated. In addition, the NPS and the Trust will conduct additional review and consultation as warranted prior to implementation of trail segments where cultural landscape effects could occur.

List of Persons and Agencies Consulted

Carla Chenault, Project Analyst, California State Coastal Conservancy

Mike Fris, Deputy Assistant Field Supervisor, U.S. Fish and Wildlife Service

Oliver Gajda, Assistant Bicycle Program Manager, City and County of San Francisco Department of Parking and Traffic

Andrea M. Gaut, Coastal Program Analyst, San Francisco Bay Conservation and Development Commission

Don Hankins, Biologist, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service

Harvey Katz, Senior Planner, Golden Gate Bridge, Highway and Transportation District

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Michael Sallaberry, Assistant Transportation Engineer, Bicycle Program, City and County of San Francisco Department of Parking and Traffic

David Snyder, Executive Director, San Francisco Bicycle Coalition

Laura Thompson; Bay Trail Planner, Association of Bay Area Governments

Holly Van Houten, Executive Director, Bay Area Ridge Trail Council

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